1

SCPI

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ü SCPI

ü

1.1

LAN USB

:CALCulate:BANDwidth:NDB <rel_ampl>

1.2.3.2

:DISPlay:AFUnction:POSition BOTTom|CENTer|TOP
“BOTTom” “CENTer” “TOP”

1.2.3.3

:DISPlay:BRIGtness <integer>
<integer> 0 255

1.2.3.4

:CALCulate:BANDwidth:NDB <rel_ampl>
<rel_ampl> -100 100

1.2.3.5

:CALCulate:MARKer<n>:MAXimum:MAX
<n> 1 2 3 4

1.2.3.6 ASCII

ASCII

2

A ~ Z IEEE 488.2

- IEEE488.2
- :CALibration
- :CALCulate
- :CONFigure
- :DISPlay
- :FETCh
- :HCOPy
- :INITiate
- :MMEMory
- [:SENSe]
- :SYSTem
- :TRACe
- :OUTPut
- :SOURce
- :UNIT

“N/A”

“ERR” ;

IEEE488.2

IEEE

“*” 3

***IDN?**	
	*IDN?
	ID *IDN? Company, MSA830, SN20000101 V1.8.0.1033
	ID + + +
***RST**	
	*RST

:CALibration

:CALibration[:ALL]	
	:CALibration[:ALL] :CALibration[:ALL]?
	:CAL **UTS1010/UTS1020 30MHz -20dB** **UTS1030 440MHz -20dB**
:CALibration:RESTore	
	:CALibration:RESTore

:CALCulate

:CALCulate:MARKer[n]:FCOunt[:STATe]	
	:CALCulate:MARKer[n]:FCOunt[:STATe] ON|OFF|0|1 :CALCulate:MARKer[n]:FCOunt[:STATe]?
	:CALC:MARK1:FCO 1 1
:CALCulate:MARKer:FCOunt:RESolution <bw>	
	:CALCulate:MARKer:FCOunt:RESolution :CALCulate:MARKer:FCOunt:RESolution
	<bw> 1,10,100,1000
:CALCulate:MARKer[n]:FCOunt:X?	
	:CALCulate:MARKer[n]:FCOunt:X?
:CALCulate:TUNE:AUTO	
	:CALCulate:TUNE:AUTO ON|OFF|0|1 :CALCulate:TUNE:AUTO?
	ON|1 OFF|0
:CALCulate:MARKer:AOFF	
	:CALCulate:MARKer:AOFF
:CALCulate:MARKer[n]:STATe	
	:CALCulate:MARKer[n]:STATe ON|OFF|0|1 :CALCulate:MARKer[n]:STATe
	[n] 1~5
:CALCulate:MARKer<n>:TRACe	
	:CALCulate:MARKer<n>:TRACe <integer>

	:CALCulate:MARKer<n>:TRACe?
	:CALC:MARK1:TRACe 1; 1 1
	n 1~5 integer 1~5
:CALCulate:MARKer<n>:TRACe	
	:CALCulate:MARKer<n>:TRACe <integer> :CALCulate:MARKer<n>:TRACe?
	:CALC:MARK1:TRACe 1; 1 1
	n 1~5 integer 1~5
:CALCulate:MARKer[n]:MODE	
	:CALCulate:MARKer[n]:MODE POSition | DELTa :CALCulate:MARKer[n]:MODE?
	:CALCulate:MARKer1:MODE DELT; DELTa
	n 1~5
:CALCulate:MARKer:TABLe:STATe	
	:CALCulate:MARKer:TABLe:STATe ON|OFF|0|1 :CALCulate:MARKer:TABLe:STATe?
	:CALCulate:MARKer:TABLe:STATe 1; 1
	0|OFF 1|ON
:CALCulate:MARKer[n]:X	
	:CALCulate:MARKer[n]:X <param> :CALCulate:MARKer[n]:X?
	:CALCulate:MARKer1:X 200MHz; 200000000
	n 1~5
:CALCulate:MARKer[n]:Y?	
	:CALCulate:MARKer[n]:Y?
	:CALC:MARK1:Y? -39.86

	n 1~5
:CALCulate:MARKer[n]:PHNoise[:STATe]	
	:CALCulate:MARKer[n]:PHNoise[:STATe] ON|OFF|0|1 :CALCulate:MARKer[n]:PHNoise[:STATe]?
	:CALCulate:MARK2:PHNoise 1; 1
	0|OFF 1|ON n 1~5
:CALCulate:MARKer:PHNoise:Y?	
	:CALCulate:MARKer:PHNoise:Y?
	:CALCulate:MARKe:PHNoise:Y? -130.12
:CALCulate:MARKer:PHNoise:OFFSet:FREQuency	
	:CALCulate:MARKer:PHNoise:OFFSet:FREQuency <freq> :CALCulate:MARKer:PHNoise:OFFSet:FREQuency?
	:CALCulate:MARKer:PHNoise:OFFSet:FREQ 100MHz 100000000
:CALCulate:MARKer:PHNoise:OFFSet	
	:CALCulate:MARKer:PHNoise:OFFSet < ± bw> :CALCulate:MARKer:PHNoise:OFFSet?
	: :CALCulate:MARKer:PHNoise:OFFSet 2MHz 2000000
:CALCulate:BWIDth|BANDwith[:STATe]	
	:CALCulate:BWIDth|BANDwith[:STATe] ON|OFF|0|1 :CALCulate:BWIDth|BANDwith[:STATe]?
	NdB :CALC:BWID 1; 1
	0|OFF

	1|ON
:CALCulate:BWIDth|BANDwith:NDB	
	:CALCulate:BWIDth|BANDwith:NDB <rel_ampl> :CALCulate:BWIDth|BANDwith:NDB?
	NdB :CALC:BWID:NDB 3; 3.00
:CALCulate:BWIDth|BANDwith:RESult?	
	:CALCulate:BWIDth|BANDwith:RESult?
	NdB :CALC:BWID:RES?; 1000300
:CALCulate:MARKer:FUNCtion:AOFF	
	:CALCulate:MARKer:FUNCtion:AOFF
:CALCulate:MARKer[n][:SET]:CENTer	
	:CALCulate:MARKer[n][:SET]:CENTer
	→
	n 1~5
:CALCulate:MARKer[n][:SET]:STEP	
	:CALCulate:MARKer[n][:SET]:STEP
	→
	n 1~5
:CALCulate:MARKer[n][:SET]:STARt	
	:CALCulate:MARKer[n][:SET]:STARt
	→
	n 1~5
:CALCulate:MARKer[n][:SET]:STOP	
	:CALCulate:MARKer[n][:SET]:STOP
	→
	n 1~5
:CALCulate:MARKer[n][:SET]:RLEVel	

	:CALCulate:MARKer[n][:SET]: RLEVel
	→
	n 1~5
:CALCulate:MARKer[n][:SET]:SPAN	
	:CALCulate:MARKer[n][:SET]: SPAN
	→
	n 1~5
:CALCulate:MARKer[n][:SET]:CENTer	
	:CALCulate:MARKer[n][:SET]:CENTer

→ n . 2 J ס

	0|OFF 1|ON n 1~5
:CALCulate:NETMeasure[:STATe]	
	:CALCulate:NETMeasure[:STATe] ON|OFF|0|1 :CALCulate:NETMeasure[:STATe]
	0|OFF 1|ON
:CALCulate:NETMeasure:RLEVel	
	:CALCulate:NETMeasure:RLEVel <ampl> :CALCulate:NETMeasure:RLEVel
	<ampl> -80dB~+30dB
:CALCulate:NETMeasure:POWer	
	:CALCulate:NETMeasure:POWer <ampt> :CALCulate:NETMeasure:POWer
	<ampt> -30dB~0dB
:CALCulate:NETMeasure:NORMalize	
	:CALCulate:NETMeasure:NORMalize

:CONFigure

:CONFigure:ACPower	
	:CONFigure:ACPower
A’5B µF' s)[# G£ I > hÔ —exBAb$ Ÿ‰vV($•T ‘t„gUG™•VïPUgUH " Qñ Q vX)€4 €	
:CONFigure:CHPower	
	:CONFigure:ACPower

:DISPlay

:DISPlay:WINdow:TRACe:Y[:SCALe]:RLEVel	
	:DISPlay:WINdow:TRACe:Y[:SCALe]:RLEVel <ampl> :DISPlay:WINdow:TRACe:Y[:SCALe]:RLEVel?
	dBm mV :DISP:WIN:TRAC:Y: RLEV -10 -10
	<ampl> -80dBm~+30dBm
	0dBm
:DISPlay:WINdow:TRACe:X[:SCALe]:OFFSet	
	:DISPlay:WINdow:TRACe:X[:SCALe]:OFFSet <freq> :DISPlay:WINdow:TRACe:X[:SCALe]:OFFSet?
	:DISP:WIN:TRAC:X:OFFS 10MHz; 10000000
	<freq> -MAXFREQ~+-MAXFREQ
	0Hz
:DISPlay:WINdow:TRACe:Y[:SCALe]:PDIVison	
	:DISPlay:WINdow:TRACe:Y[:SCALe]:PDIVison <rel_ampl> :DISPlay:WINdow:TRACe:Y[:SCALe]:PDIVison?
	:DISP:WIN:TRAC:Y:PDIV 5.0; 5.00
	< rel_ampl > 1 ~ 255
	10.0
:DISPlay:WINdow:TRACe:Y[:SCALe]:SPACing	
	:DISPlay:WINdow:TRACe:Y[:SCALe]: SPACing LINear| LOGarithmic :DISPlay:WINdow:TRACe:Y[:SCALe]: SPACing?

	:DISPlay:WINdow:TRACe:Y[:SCALe]:RLEVel:OFFSet <rel_ampl> :DISPlay:WINdow:TRACe:Y[:SCALe]:RLEVel:OFFSet?
	dBm :DISP:WIN:TRAC:Y: RLEV:OFFS 20 20.00
	< rel_ampl > 0 ~ 120
	0dBm
:DISPlay:ENABle	
	:DISPlay:ENABle ON|OFF|0|1 :DISPlay:ENABle
	0|OFF 1|ON
:DISPlay:MENU:STATe	
	:DISPlay:MENU:STATe ON|OFF|0|1 :DISPlay:MENU:STATe
:DISPlay:FORMat:ZOOM	
	:DISPlay:FORMat:ZOOM ON|OFF|0|1 :DISPlay:FORMat: ZOOM
	0|OFF 1|ON
:DISPlay:WINdow:TRACe:Y:DLINe	
	:DISPlay:WINdow:TRACe:Y:DLINe <ampl> :DISPlay:WINdow:TRACe:Y:DLINe?
	dBm mV :DISP:WIN:TRAC:Y:DLIN -20 -20
	-25dBm
:DISPlay:WINdow:TRACe:Y:DLINe:STATe	
	:DISPlay:WINdow:TRACe:Y:DLINe:STATe ON|OFF|0|1 :DISPlay:WINdow:TRACe:Y:DLINe:STATe?
	:DISP:WIN:TRAC:Y:DLIN:STATe ON

:FETCh

:FETCh:ACPower:MAIN?	
	:FETCh:ACPower:MAIN?
:FETCh:ACPower?	
	:FETCh:ACPower?
:FETCh:ACPower:LOWer?	
	:FETCh:ACPower:LOWer?
:FETCh:ACPower:UPPer?	
	:FETCh:ACPower:UPPer?
:FETCh:CHPower:POWer?	
	:FETCh:CHPower:POWer?

:HCOPy

:HCOPy:IMAGe:COLor[:STATe]	
	:HCOPy:IMAGe:COLor[:STATe]　ON|OFF|0|1 :HCOPy:IMAGe:COLor[:STATe]?
	ON|1 OFF|0
:HCOPy:PAGE:ORIentation	
	:HCOPy:PAGE:ORIentation　LANDscape|PORTrait :HCOPy:PAGE:ORIentation?
	LANDscape PORTrait
:HCOPy:PAGE:SIZE	
	:HCOPy:PAGE:SIZE　Letter|A4|A5|A6|B5 :HCOPy:PAGE:SIZE?
:HCOPy:PAGE:PRINts	
	:HCOPy:PAGE:PRINts　<integer> :HCOPy:PAGE:PRINts?
	Integer　　1~5
:HCOPy:SCReen	
	:HCOPy:SCReen
:HCOPy:TRACe	
	:HCOPy:TRACe

:INITiate

[:INITiate]:CONTinuous	
	[:INITiate]:CONTinuous OFF|ON|0|1 [:INITiate]:CONTinuous?
	0 OFF 1 ON :INIT:CONT 0 0
	 ON|1 OFF|0
	ON|1

:MMEMory

:MMEMory:CATalog?	
	:MMEMory:CATalog?
:MMEMory:STORe:STATe	
	:MMEMory:STORe:STATe
:MMEMory:DISK:INFormation?	
	:MMEMory:DISK:INForma
:MMEMory:STORe:TRACe	
	:MMEMory:STORe:TRACe
	d *.csv
:MMEMory:STORe:SCReen	

:MMEMory:STORe:SCReen

:MMEMory:DELete:TRACe	
	:MMEMory:DELete:TRACe <file_name>
:MMEMory:DELete:SCReen	
	:MMEMory:DELete:SCReen <file_name>
:MMEMory:DELete:TRACe:ALL	
	:MMEMory:DELete:TRACe:ALL
:MMEMory:DELete:SCReen:ALL	
	:MMEMory:DELete:SCReen:ALL
:MMEMory:DELete: ALL	
	:MMEMory:DELete:ALL
:MMEMory:COPY:ALL	
	:MMEMory:COPY:ALL
:MMEMory:COPY:STATe:ALL	
	:MMEMory:COPY:STATe:ALL
:MMEMory:COPY:STATe	
	:MMEMory:COPY:STATe <file_name>
:MMEMory:COPY:SCReen:ALL	

	:MMEMory:COPY:SCReen:ALL
:MMEMory:COPY:SCReen	
	:MMEMory:COPY:SCReen <file_name>

[:SENSe]

[:SENSe]:FREQuency:CENTer

	1
	Õ ON|1 Õ OFF|0
[:SENSe]:FREQuency:REFerence INTernal|EXTernal	
	[:SENSe]:FREQuency:REFerence INTernal|EXTernal [:SENSe]:FREQuency:REFerence?
	:FREQ:REF INT INTernal
	INTernal: EXTernal
	INTernal
[:SENSe]:FREQuency:SPAN	
	[:SENSe]:FREQuency:SPAN <freq> [:SENSe]:FREQuency:SPAN?
	GHz,MHz,KHz,Hz Hz :FREQ:SPAN 1000000 :FREQ:SPAN 1MHz 1000000
	<freq> 0Hz~1GHz 0
	1GHz
[:SENSe]:FREQuency:SPAN:FULL	
	[:SENSe]:FREQuency:SPAN:FULL
[:SENSe]:FREQuency:SPAN:ZERO	
	[:SENSe]:FREQuency:SPAN:ZERO
[:SENSe]:FREQuency:SPAN:PREVious	
	[:SENSe]:FREQuency:SPAN:PREVious

[:SENSe]:BANDwidth|BWIDth[:RESolution]	
	[:SENSe]:BANDwidth[:RESolution] <freq> [:SENSe]:BWIDth[:RESolution] <freq> [:SENSe]:BANDwidth[:RESolution]? [:SENSe]:BWIDth[:RESolution]?
	GHz,MHz,KHz,Hz Hz :BAND:RES 1000 :BAND:RES 1KHz 1000
	44 3MHz, 1MHz, 500kHz, 400 kHz, 300 kHz, 200 kHz, 100 kHz, 90 kHz, 80 kHz, 70 kHz, 60 kHz, 50 kHz, 40 kHz, 30 kHz, 20 kHz, 10 kHz, 9 kHz, 8 kHz, 7 kHz, 6 kHz, 5 kHz, 4 kHz, 3 kHz, 2 kHz, 1 kHz, 900Hz, 800 Hz, 700 Hz, 600 Hz, 500 Hz, 400 Hz, 300 Hz, 200 Hz, 100 Hz, 90 Hz, 80 Hz, 70 Hz, 60 Hz, 50 Hz, 40 Hz, 30 Hz, 20 Hz, 10 Hz
	3MHz
[:SENSe]:BANDwidth|BWIDth[:RESolution]:AUTO	
	[:SENSe]:BANDwidth[:RESolution] :AUTO OFF|ON|0|1 [:SENSe]:BWIDth[:RESolution] :AUTO OFF|ON|0|1 [:SENSe]:BANDwidth[:RESolution] :AUTO [:SENSe]:BWIDth[:RESolution] :AUTO
	:BAND:RES:AUTO OFF 0
	Õ ON|1 Õ OFF|0
[:SENSe]:BANDwidth|BWIDth[:RESolution]:STEP:MODE	
	[:SENSe]:BANDwidth[:RESolution]:STEP:MODE 0|1 [:SENSe]:BWIDth[:RESolution]:STEP:MODE 0|1 [:SENSe]:BANDwidth[:RESolution]:STEP:MODE? [:SENSe]:BWIDt[:RESolution]STEP:MODE?
	:BAND:RES:STEP:MODE 0 0
	Õ ON|1 1 3 5 Õ OFF|0
[:SENSe]:BANDwidth|BWIDth:VIDeo	
	[:SENSe]:BANDwidth:VIDeo <freq> [:SENSe]:BWIDth:VIDeo <freq> [:SENSe]:BANDwidth:VIDeo?

	[:SENSe]:BWIDth:VIDeo?
	GHz,MHz,KHz,Hz Hz :BAND:VID 1000000 :BAND:VID 1MHz 1000000
	18 3MHz, 1MHz, 500kHZ, 300kHZ, 100kHZ, 50kHZ, 30kHZ, 10kHZ, 5kHZ, 3kHZ, 1kHZ, 500Hz, 300Hz, 100Hz, 50Hz, 30Hz, 10Hz, 0Hz
	3MHz
[:SENSe]:BANDwidth|BWIDth:VIDeo:AUTO	
	[:SENSe]:BANDwidth:VIDeo:AUTO OFF|ON|0|1 [:SENSe]:BWIDth:VIDeo:AUTO OFF|ON|0|1 [:SENSe]:BANDwidth:VIDeo:AUTO? [:SENSe]:BWIDth:VIDeo:AUTO?
	:BAND:VID:AUTO OFF 0
	Õ ON|1 Õ OFF|0
[:SENSe]:BANDwidth|BWIDth:EMC	
	[:SENSe]:BANDwidth:EMC <freq> [:SENSe]:BWIDth:EMC <freq> [:SENSe]:BANDwidth:EMC? [:SENSe]:BWIDth:EMC?
	EMC GHz,MHz,KHz,Hz 1MHz 120kHz 30kHz 9kHz 200Hz :BAND:EMC 120000 :BAND:EMC 120kHz 120000
	120kHz
[:SENSe]:BANDwidth|BWIDth:EMC:STATe	
	[:SENSe]:BANDwidth:EMC:STATe ON|OFF|1|0 [:SENSe]:BWIDth:EMC: STATe ON|OFF|1|0 [:SENSe]:BANDwidth:EMC:STATe? [:SENSe]:BWIDth:EMC:STATe?
	EMC :BAND:EMC:STATe OFF 0

[:SENSe]:AVERage:COUNt	
	[:SENSe]:AVERage:COUNt <integer> [:SENSe]:AVERage:COUNt?
	:AVER:COUN 50 50
[:SENSe]:AVERage[:STATe]	
	[:SENSe]:AVERage[:STATe] OFF|ON|0|1 [:SENSe]:AVERage[:STATe]?
	:AVER 1 1
	0
[:SENSe]:POWer[:RF]:ATTenuation	
	[:SENSe]:POWer[:RF]:ATTenuation <att> [:SENSe]:POWer[:RF]:ATTenuation
	dBm dBmV dBuV mW mV; dBm :POW:ATT 10.0 :POW:ATT 10.0dBm 10.0
	<value> 0~30.0dB
	10dB
[:SENSe]:POWer[:RF]:ATTenuation:AUTO	
	[:SENSe]:POWer[:RF]:ATTenuation:AUTO ON|OFF|1|0 [:SENSe]:POWer[:RF]:ATTenuation:AUTO?
	/ :POW:ATT:AUTO OFF 0
	ON|1 OFF|0
[:SENSe]:POWer[:RF]:GAIN[:STATe]:AUTO	
	[:SENSe]:POWer[:RF]:GAIN[:STATe]:AUTO ON|OFF|1|0 [:SENSe]:POWer[:RF]:GAIN[:STATe]:AUTO?
	/

	:POWer:GAIN:AUTO OFF 0
	ON|1 OFF|0
[:SENSe]:SWEep:TIME	
	[:SENSe]:SWEep:TIME <time> [:SENSe]:SWEep:TIME?
	s( ),ms( ) ms( ) :SWE:TIME 100 :SWE:TIME 100ms 100
	<time> Õ 10ms~3000s Õ 1ms~3000s
	(1GHz) 13.333ms
[:SENSe]:SWEep:TIME:AUTO	
	[:SENSe]:SWEep:TIME:AUTO OFF|ON|0|1 [:SENSe]:SWEep:TIME:AUTO?
	:SWE:TIME:AUTO OFF 0
	Õ ON|1 Õ OFF|0
[:SENSe]:SWEep:POINts	
	[:SENSe]:SWEep:POINts <number> [:SENSe]:SWEep:POINts?
	:SWE:POIN 501 501
	number 201~1001
[:SENSe]:DETector[:FUNCtion]	
	[:SENSe]:DETector[:FUNCtion] AUTO|NORMal|POSitive|SAMPle|NEGative **[:SENSe]:DETector[:FUNCtion]?**
	:DET POS; POS
	AUTO

	NORMal POSitive SAMPle NEGative
	AUTO
[:SENSe]:ACPower:BANDwidth:INTegration	
	[redacted]e]:ACPower:BANDwidth:INTegration <freq> [redacted]e]:ACPower:BANDwidth:INTegration?
	:ACP:BAND:INT 1MHz; 1000000

[redacted]

	98
[:SENSe]:CHPower:FREQuency:SPAN	
	[:SENSe]: CHPower:FREQuency:SPAN <freq> [:SENSe] :CHPower:FREQuency:SPAN?
	:CHP:FREQ:SPAN 1MHz; 100000
[:SENSe]:DEMod:STATe	
	[:SENSe]:DEMod:STATe ON|OFF|0|1 [:SENSe]:DEMod:STATe?
	:DEM:STAT 1; 1

:SYSTem

:SYSTem:DATE	
	:SYSTem:DATE <year>,<month>,<day> :SYSTem:DATE?
	:SYST:DATE 2011,7,1 2011,7,1
	<year> 2000~2037 <month> 1~12 <day> 1~31
:SYSTem:TIME	
	:SYSTem:TIME <hour>,<minute>,<second> :SYSTem:TIME?
	:SYST:TIME 12,00,00 12,00,00
	<hour> 0~23 <minute> 0~59 <second> 0~59
:SYSTem:PRESet:TYPE	
	:SYSTem:PRESet:TYPE FACTory|USER :SYSTem:PRESet:TYPE?
	:SYST:PRES:TYPE FACT FACT
	FACT USER
:SYSTem:PON:TYPE	
	:SYSTem:PON:TYPE FACTory|USER :SYSTem:PON:TYPE?
	:SYST:PON:TYPE FACT FACT
	FACT USER
:SYSTem:PRESet[:USER]:SAVE:TYPE	
	:SYSTem:PRESet[:USER]:SAVE:TYPE USER :SYSTem:PRESet[:USER]:SAVE:TYPE?

	:SYST:PRES:SAVE USER USER
	USER
:SYSTem:COMMunicate:LAN:IP:ADDRess	
	:SYSTem:COMMunicate:LAN:IP:ADDRess <ip> :SYSTem:COMMunicate:LAN:IP:ADDRess?
	IP :SYST:COMM:LAN:IP:ADDR 192.168.1.10 192.168.1.10
	<ip> ip
:SYSTem:COMMunicate:LAN:MASK	
	:SYSTem:COMMunicate:LAN:MASK <mask> :SYSTem:COMMunicate:LAN:MASK?
	:SYST:COMM:LAN:MASK 255.255.255.0 255.255.255.0
:SYSTem:COMMunicate:LAN:GATE	
	:SYSTem:COMMunicate:LAN:GATE <gate> :SYSTem:COMMunicate:LAN:GATE
	:SYST:COMM:LAN:GATE 192.168.1.1 192.168.1.1
:SYSTem:SPEaker:VOLume	
	:SYSTem:SPEaker:VOLume <integer> :SYSTem:SPEaker:VOLume
	:SYSTem:SPEaker:VOLume 50 50

:TRACe

:TRACe[:DATA]	
	:TRACe[:DATA] ? TRACE1| TRACE2| TRACE3| TRACE4| TRACE5
	:TRAC? TRACE1 64.7301,-68.163, …, -36.185,-57.931
	5 TRACE1 TRACE2 TRACE3 TRACE4 TRACE5 ”,” 7
:TRACe<n> :MODE	
	:TRACe<n>:MODE WRITe|MAXHold|MINHold|VIEW|BLANk :TRACe<n>:MODE?
	:TRACe1:MODE MAXH MAXHold
	5 TRACE1|TRACE2|TRACE3|TRACE4|TRACE5 5 | | | |
	TRACE1 TRACE2 TRACE3 TRACE4 TRACE5
:TRACe:SOCKdata?	
	:TRACe:SOCKdata? TRACE1| TRACE2| TRACE3| TRACE4| TRACE5
	( ) :TRAC:SOCK? Trace1; c1 b8 de 61 c2 84 83 26 c2 81 82 9d c2 81 b9 c6 …2a 6a c2 81 3e 9d c2 82 71 eb c2 80 85 90 0d 0a
	5 TRACE1 TRACE2 TRACE3 TRACE4 TRACE5 ” ” UTS1000 UTS2000

:SOURce

:SOURce:POWer:TRACk:POWer	
	:SOURce:POWer:TRACk:POWer <pow> :SOURce:POWer:TRACk:POWer
	-dBm :SOURce:POWer:TRAC:POWer -20; -20
	<pow> -30 dBm ~ 0dBm
	-10dBm
:SOURce:OUTPut:POWer	
	:SOURce:OUTPut:POWer <pow> :SOURce:OUTPut:POWer
	-dBm :SOURce:OUTPut:POWer -20; -20
	<pow> -30 dBm ~ 0dBm
	-10dBm

:UNIT

:UNIT:POWer	
	:UNIT:POWer dBm|dBuW|dBpW|dBmV|dBuV|V|W :UNIT:POWer
	dBm :UNIT:POW dBpW; dBpW
	dBm

3

LAN GPIB

LAN SOCKET DELPHI7.0

GPIB Agilent VISA Visual C# 2005

3.1

NI VISA Agilent IO Libraries Sute IO Libraries Sute

http://www.home.agilent.com/agilent/product.jspx?nid=-34466.977662.00&lc=chi&cc=CN

D:\Program files\

Delphi7.0 Visual C# 2005

GPIB GPIB

3.2 Delphi7.0

IP 192.168.1.6 4060 IP 192.168.1.138

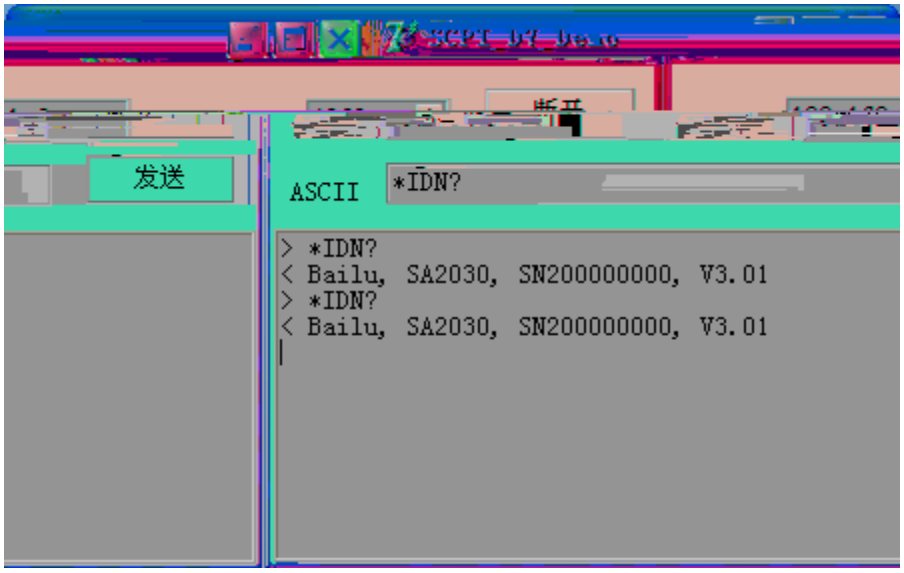
```
        procedure BtnConnectClick(Sender: TObject);
        procedure BtnSendClick(Sender: TObject);
    private
        { Private declarations }
    public
        { Public declarations }
    end;

var
    FrmSCPIDemo: TFrmSCPIDemo;

implementation

{$R *.dfm}

procedure TFrmSCPIDemo.BtnConnectClick(Sender: TObject);
begin
    if (BtnConnect.Capti
```

```
    end;
end;

procedure TFrmSCPIDemo.BtnSendClick(Sender: TObject);
begin
    if TcpClient1.Connected then
    begin
        TcpClient1.Sendln(Edit2.Text);
        MemRecv.Lines.Add('> ' + Edit2.Text);
        Sleep(2000);
        MemRecv.Lines.Add('< ' + TcpClient1.Receiveln);
    end;
end;

end.
```

ü Project Ą Compile Project

ü Run Ą Run

ü < > < >



3.3 Visual C# 2005

ADLINK GPIB USB ADLINK

ADLINK

ü “GPIB-32.dll”

```
using System.Runtime.InteropServices;
using System.Text;
……
public static extern void SendCmds( int board_desc, char[] cmds, long count );
[DllImport("Gpib-32.dll")]
```

public static extern void SendDataBytes(int

4

1 (STB)

Status Byte Register(STB)

0		0
1		0
2	EAV	1 :SYST:ERR? 0
3		0
4	MAV	1 0
5	ESB	1 / 0
6		0
7		1 / 0

2 (ESE)

Stndrdntt Enable Register(ESE)

0	(OPC)	1 ESR Bit0 0 ESR
1	(RQC)	1 ESR Bit1 0 ESR
2	(QYE)	1 ESR Bit2 0 ESR
3	(DDE)	1 ESR Bit3 0 ESR
4	(E)	1 ESR Bit4 0 ESR
5	(CME)	1 ESR Bit5 0 ESR
6	(NU)	0
7	(PON)	1 ESR Bit7

		0 ESR Bit7

3 (ESR)

Standard Event Status Register(ESR)

0	(OPC)	1 0
1	(RQC)	1 0
2	(QYE)	1 0
3	(DDE)	1 0
4	(E)	1 0
5	(CME)	1 0
6	(NU)	0
7	(PON)	1 0

4 (OSR)

0		1 0
1		1 0
2		1 0
3		1 0
4		1 0
5		1 0
6	ARM	1 ARM 0 ARM
7		1 0
8		0

9		0
10		0
11		0
12		0
13		1 0
14		1 0
15		0

( )