

First of all, necessary to define available UHCI-hosts.
Use the utility USBHOSTS.COM :

```
C:\>
C:\>usbhosts.com
USBHOSTS 0.06, (C) 2007-2009, Bret E. Johnson.
PCI BUS
  I  B  D  F
HOST d  u  v  n
TYPE x  s  c  c  VENDR  PROD  VER  NUM  ADDR  BASE PHYSICAL
                                HST
                                IDX  STATUS  BW
                                USED
UHCI 0  0 29 0  8086h 24D2h 1.0  5 BC00h
UHCI 1  0 29 1  8086h 24D4h 1.0  9 B000h
UHCI 2  0 29 2  8086h 24D7h 1.0 11 B400h
UHCI 3  0 29 3  8086h 24DEh 1.0  5 B800h
EHCI 0  0 29 7  8086h 24DDh 2.0  4 F610_0000h
C:\>
```

possible start :

```
usbuhci.com /Index:0 /DisableLegacy
or
usbuhci.com /Index:1 /DisableLegacy
or
usbuhci.com /Index:2 /DisableLegacy
or
usbuhci.com /Index:3 /DisableLegacy
```

start usb-stack of bretjonson.us :

```
C:\>usbuhci.com /Index:0 /DisableLegacy
USBUHCI 0.14, (C) 2007-2010, Bret E. Johnson.
DOS Driver for a Universal HCI compatible USB Host Controller.

Initializing Universal Host Controller #0. This may take several seconds...

USBUHCI has been installed into Low Memory.
Type "USBUHCI U" to Uninstall USBUHCI from memory.
C:\>
```

Reboot or unloaded
&
Index +1

**There must be a compatible USB Host Driver installed in memory
(something like USBUHCI.COM) before this program can be started**

```
C:\>usbdevic.com
USBDEVIC 0.05, (C) 2008, Bret E. Johnson.
Program to display information about Devices attached to the USB Host(s).

DEVICE ADDRESSES
Host Index: 1 Host Type: UHCI Bus Type: PCI IRQ#: 9 Root Hub Ports: 2
Vendor: 8086h = Intel Corp Product: 24D4h

DEVICES INTERFACES
ADRS L o P C I A 0
(hex) S o n l w
Test VEND PROD Sub Pro p USB HUB r POWR f f I e Sub Pro
Rwak ID ID Cls Cls col d VER ADDR t (mA) g c n DESCRIPTION d Cls Cls col
1 8086 24D4 9 0 0 0 . 1.0 ... s 0 1 0 0 *Root Hub Y 9 0 0
Intel Corp
2R 0566 3107 0 0 0 0 Y 1.1 1 1 100 1 0 0 *Keyboard . 3 1 1
Monterey International Corp 1 0 *Human Intf Dvc . 3 0 0

C:\>
```

without devices
or
no necessary device

```
C:\>usbdevic.com
USBDEVIC 0.05, (C) 2008, Bret E. Johnson.
Program to display information about Devices attached to the USB Host(s).

DEVICE ADDRESSES
Host Index: 2 Host Type: UHCI Bus Type: PCI IRQ#: 11 Root Hub Ports: 2
Vendor: 8086h = Intel Corp Product: 24D7h

DEVICES INTERFACES
ADRS L o P C I A 0
(hex) S o n l w
Test VEND PROD Sub Pro p USB HUB r POWR f f I e Sub Pro
Rwak ID ID Cls Cls col d VER ADDR t (mA) g c n DESCRIPTION d Cls Cls col
1 8086 24D7 9 0 0 0 . 1.0 ... s 0 1 0 0 *Root Hub Y 9 0 0
Intel Corp
2R 09DA 000A 0 0 0 0 Y 1.1 1 1 100 1 0 0 *Mouse . 3 1 2
A-Four Tech Co Ltd
3R 6D5 6501 0 0 0 0 . 1.1 1 2 500 1 0 0 *Unknown Device . 255 255 255
AnyDATA Corp 1 0 *Unknown Device . 255 255 255

C:\>
```

something there is
(maybe this modem)

Now, it is necessary to define parameters :

used of determinate
CTS, DSR, CD, Ring
Overrun, ParityErr, FrameErr, Break, OutClear

for received bytes

/Y: 2, 3, Interface Number , EndPoint Interrupt , EndPoint Bulk-OUT , EndPoint Bulk-IN

used of set/clear DTR and RTS

for send bytes

There must be a compatible USB Host Driver installed in memory
(something like USBUHCI.COM) before this program can be started

usbuhci /Index: 2 /Descr: 3 > list.txt

USBUHCI 0.14; (C) 2007-2010, Bret E. Johnson.
DOS Driver for a Universal HCI compatible USB Host Controller.
LITE version (maximum 16 Devices, no Isochronous Transactions).

DEVICE DESCRIPTOR

Descr Length:	12h 18
Descr Type:	01h Device
USB Release:	0110h 1.10
Device Class:	00h Look at Interface
Device SubClass:	00h None
Device Protocol:	00h None
Max Packet Size EP0:	40h 64
Vendor ID:	1050h AnyDATA Corp
Product ID:	6501h 25,857
Device Release:	0000h 0.00
Manufacturer String:	03h "AnyDATA Corporation"
Product String:	02h "AnyDATA CDMA Products"
Serial # String:	00h None
# of Configs:	01h 1

list.txt

CONFIGURATION DESCRIPTOR

Descr Length:	09h 9
Descr Type:	02h Configuration
Descr Total Length:	0020h 32
# of Interfaces:	02h 2
Configuration Value:	01h 1
Configuration String:	00h None
Attributes:	80h Valid Historical Attribute 80h Bus Powered Remote Wakeup Not Battery Powered
Current Draw / 2:	F4h 250 (500 mA)

INTERFACE DESCRIPTOR

Descr Length:	09h 9
Descr Type:	04h Interface
Interface Number:	00h 0
Alternate Setting:	00h 0
# of End Points:	03h 3
Interface Class:	FFh Vendor-specific
Interface SubClass:	FFh Vendor-specific
Interface Protocol:	FFh Vendor-specific
Interface String:	03h "Data Interface"

END POINT DESCRIPTOR

Descr Length:	07h 7
Descr Type:	05h EndPoint
End Point Number:	03h EndPoint = 1 Direction = In
Attributes:	03h Interrupt NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	00h 128

END POINT DESCRIPTOR

Descr Length:	07h 7
Descr Type:	05h EndPoint
End Point Number:	02h EndPoint = 2 Direction = In
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	00h 0

END POINT DESCRIPTOR

Descr Length:	07h 7
Descr Type:	05h EndPoint
End Point Number:	02h EndPoint = 2 Direction = Out
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	00h 0

INTERFACE DESCRIPTOR

Descr Length:	09h 9
Descr Type:	04h Interface
Interface Number:	01h 1
Alternate Setting:	00h 0
# of End Points:	02h 2
Interface Class:	FFh Vendor-specific
Interface SubClass:	FFh Vendor-specific
Interface Protocol:	FFh Vendor-specific
Interface String:	03h "Data Interface"

END POINT DESCRIPTOR

Descr Length:	07h 7
Descr Type:	05h EndPoint
End Point Number:	04h EndPoint = 4 Direction = In
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	00h 0

END POINT DESCRIPTOR

Descr Length:	07h 7
Descr Type:	05h EndPoint
End Point Number:	04h EndPoint = 4 Direction = Out
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	00h 0

CDMA-modem
AnyDATA ADU-310A

Y: 2, 3, 0, 1, 2, 2

There must be a compatible USB Host Driver installed in memory
(something like USBUHCI.COM) before this program can be started

usbuhci /Index: 2 /Descr: 3 > list.txt

USBHCI 0.14, (C) 2007-2010, Bret E. Johnson.
DOS Driver for a Universal HCI compatible USB Host Controller.

USB Serial Adapter
GMUS-03

DEVICE DESCRIPTOR

list.txt

Descr Length:	12h	18
Descr Type:	01h	Device
USB Release:	0110h	1.10
Device Class:	00h	Look at Interface
Device SubClass:	00h	None
Device Protocol:	00h	None
Max Packet Size EP0:	08h	8
Vendor ID:	0678h	Prolific Technology Inc
Product ID:	2303h	8,963
Device Release:	0202h	2.02
Manufacturer String:	00h	None
Product String:	00h	None
Serial # String:	00h	None
# of Configs:	01h	1

CONFIGURATION DESCRIPTOR

Descr Length:	09h	9
Descr Type:	02h	Configuration
Descr Total Length:	0027h	39
# of Interfaces:	01h	1
Configuration Value:	01h	1
Configuration String:	00h	None
Attributes:	A0h	Valid Historical Attribute 80h Bus Powered Remote Wakeup Not Battery Powered
Current Draw / 2:	32h	50 (100 mA)

INTERFACE DESCRIPTOR

Descr Length:	09h	9
Descr Type:	04h	Interface
Interface Number:	00h	0
Alternate Setting:	00h	0
# of End Points:	03h	3
Interface Class:	FFh	Vendor-specific
Interface SubClass:	00h	None
Interface Protocol:	00h	None
Interface String:	00h	None

END POINT DESCRIPTOR

Descr Length:	07h	7
Descr Type:	05h	EndPoint
End Point Number:	81h	EndPoint = 1 Direction = In
Attributes:	03h	<u>Interrupt NonSynchronous Data</u>
Max Packet Size:	000Ah	10
Max Poll Interval:	01h	1

END POINT DESCRIPTOR

Descr Length:	07h	7
Descr Type:	05h	EndPoint
End Point Number:	02h	EndPoint = 2 Direction = Out
Attributes:	02h	<u>Bulk NonSynchronous Data</u>
Max Packet Size:	0040h	64
Max Poll Interval:	00h	0

END POINT DESCRIPTOR

Descr Length:	07h	7
Descr Type:	05h	EndPoint
End Point Number:	83h	EndPoint = 3 Direction = In
Attributes:	02h	<u>Bulk NonSynchronous Data</u>
Max Packet Size:	0040h	64
Max Poll Interval:	00h	0

/Y: 2, 3, 0, 1, 2, 3

There must be a compatible USB Host Driver installed in memory
(something like USBUHCI.COM) before this program can be started

usbuhci /Index: 2 /Descr: 3 > list.txt

mobilephone
Nokia-5130

list.txt

INTERFACE DESCRIPTOR	
Descr Length:	09h 9
Descr Type:	04h Interface
Interface Number:	01h 1
Alternate Setting:	00h 0
# of End Points:	01h 1
Interface Class:	02h Communications Control
Interface SubClass:	02h Abstract Control (modem)
Interface Protocol:	03h AT commands V.25ter
Interface String:	00h None
UNKNOWN DESCRIPTOR	
Descr Length:	05h 5
Descr Type:	24h Unknown!
Unknown Data:	00h 0
Unknown Data:	10h 16
Unknown Data:	01h 1
UNKNOWN DESCRIPTOR	
Descr Length:	04h 4
Descr Type:	24h Unknown!
Unknown Data:	02h 2
Unknown Data:	06h 6
UNKNOWN DESCRIPTOR	
Descr Length:	05h 5
Descr Type:	24h Unknown!
Unknown Data:	01h 1
Unknown Data:	03h 3
Unknown Data:	02h 2
UNKNOWN DESCRIPTOR	
Descr Length:	05h 5
Descr Type:	24h Unknown!
Unknown Data:	06h 6
Unknown Data:	01h 1
Unknown Data:	02h 2
UNKNOWN DESCRIPTOR	
Descr Length:	04h 4
Descr Type:	24h Unknown!
Unknown Data:	FDh 253
Unknown Data:	00h 0
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	01h Endpoint = 1 Direction = In
Attributes:	03h Interrupt NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	20h 32
INTERFACE DESCRIPTOR	
Descr Length:	09h 9
Descr Type:	04h Interface
Interface Number:	02h 2
Alternate Setting:	00h 0
# of End Points:	02h 2
Interface Class:	0Ah Communications Data
Interface SubClass:	00h None
Interface Protocol:	00h None
Interface String:	00h None
UNKNOWN DESCRIPTOR	
Descr Length:	04h 4
Descr Type:	24h Unknown!
Unknown Data:	FDh 253
Unknown Data:	00h 0
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	02h Endpoint = 2 Direction = In
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	00h 0
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	02h Endpoint = 2 Direction = Out
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	00h 0
INTERFACE DESCRIPTOR	
Descr Length:	09h 9
Descr Type:	04h Interface
Interface Number:	03h 3
Alternate Setting:	00h 0
# of End Points:	00h 0
Interface Class:	02h Communications Control
Interface SubClass:	08h OBEX Control
Interface Protocol:	00h None
Interface String:	00h None

/Y: 2, 3, 1, 1, 2, 2

There must be a compatible USB Host Driver installed in memory
(something like USBUHCI.COM) before this program can be started

usbuhci /Index: 2 /Descr: 3 > list.txt

Huawei E1550

DEVICE DESCRIPTOR	
Descr Length:	12h 18
Descr Type:	01h Device
USB Release:	0200h 2.00
Device Class:	00h Look at Interface
Device SubClass:	00h None
Device Protocol:	00h None
Max Packet Size EPO:	40h 64
Vendor ID:	1201h Huawei Technologies
Product ID:	1003h 4.099
Device Release:	0000h 0.00
Manufacturer String:	03h "HUAWEI Technology"
Product String:	01h "HUAWEI Mobile"
Serial # String:	00h None
# of Configs:	01h 1
CONFIGURATION DESCRIPTOR	
Descr Length:	09h 9
Descr Type:	02h Configuration
Descr Total Length:	006Ch 108
# of Interfaces:	04h 4
Configuration Value:	01h 1
Configuration String:	03h "Qualcomm Configuration"
Attributes:	EDh Valid Historical Attribute 80h Self Powered Remote Wakeup Nob Battery Powered F0h 250 (500 mA)
Current Draw / 2:	
INTERFACE DESCRIPTOR	
Descr Length:	09h 9
Descr Type:	04h Interface
Interface Number:	00h 0
Alternate Setting:	00h 0
# of End Points:	03h 3
Interface Class:	FFh Vendor-specific
Interface SubClass:	FFh Vendor-specific
Interface Protocol:	FFh Vendor-specific
Interface String:	00h None
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	81h Endpoint = 1 Direction = In
Attributes:	03h Interrupt NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	05h 5
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	02h Endpoint = 2 Direction = In
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	20h 32
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	01h Endpoint = 1 Direction = Out
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	20h 32
INTERFACE DESCRIPTOR	
Descr Length:	09h 9
Descr Type:	04h Interface
Interface Number:	01h 1
Alternate Setting:	00h 0
# of End Points:	02h 2
Interface Class:	FFh Vendor-specific
Interface SubClass:	FFh Vendor-specific
Interface Protocol:	FFh Vendor-specific
Interface String:	00h None
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	83h Endpoint = 3 Direction = In
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	20h 32
END POINT DESCRIPTOR	
Descr Length:	07h 7
Descr Type:	05h Endpoint
End Point Number:	02h Endpoint = 2 Direction = Out
Attributes:	02h Bulk NonSynchronous Data
Max Packet Size:	0040h 64
Max Poll Interval:	20h 32

Y: 2, 3, 0, 1, 1, 2

now possible start lspppacm.exe
(example for ADU-310A)

lspppacm.exe /Y:2,3,0,1,2,2 /U:mobile /P:internet /d:#777 /M:ATZ^MAT&D2

```
C:\>
C: >lspppacm.exe /Y:2,3,0,1,2,2 /U:mobile /P:internet /d:#777 /M:ATZ^MAT&D2

LADSoft PPP Packet Driver Ver 1.0 Copyright (c) LADSoft, 1999-2003
portions of Goluchin Michail:
    2010 working with "www.bretjohnson.us USB-stack" & CDC/ACM device

Connecting with HOST=2 DEVICE=3 ...
Dialing...Connecting to network...Authenticating...Negotiating IP linkage...
Connection open
Installed packet driver handler at vector 0x60
C:\>
C:\>
C:\>type ip-up.bat
set myip=92.36.17.3
set remip=212.119.106.134
set netmask=0.0.0.0
set peermtu=1500
set dns1=212.119.97.5
set dns2=212.119.96.76
C:\>
```

then - Arachne and/or miscellaneous