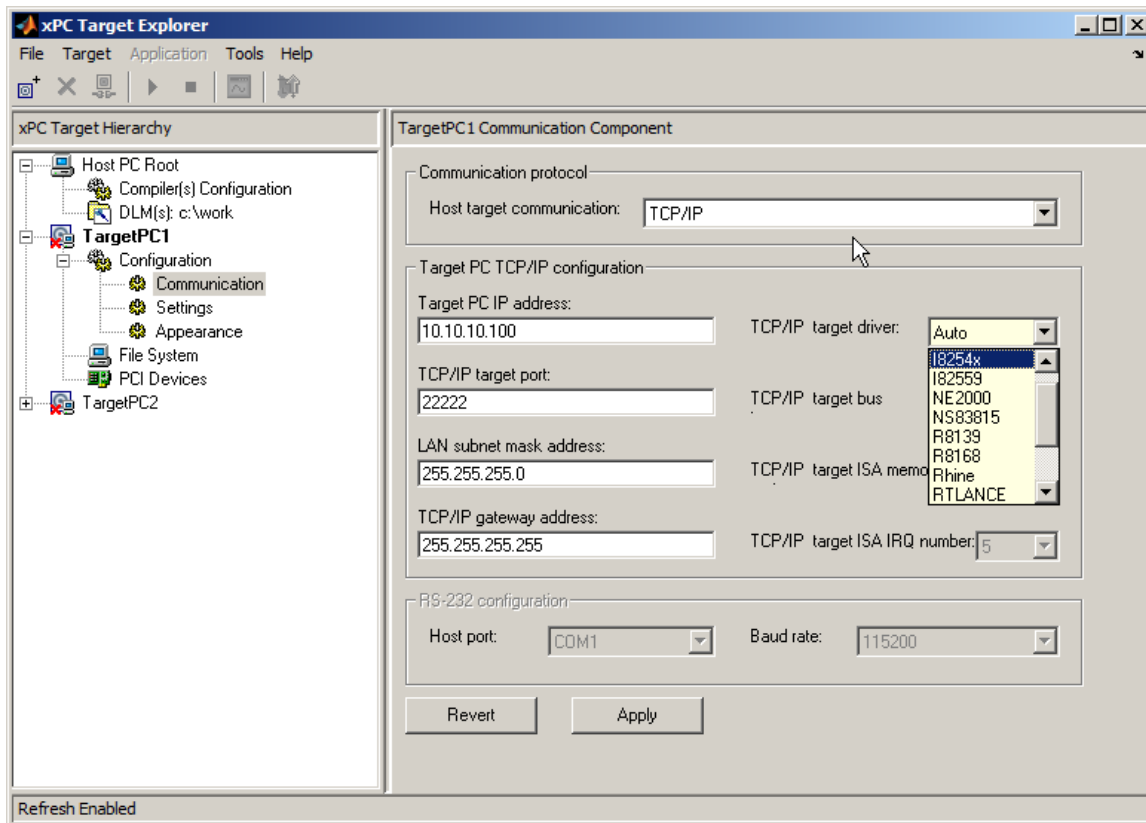


xPC Target Version 5.2 (R2012a)

Requirements for Host-Target TCP/IP Communication

This document lists the PCI¹ and USB Ethernet chips that are supported by the xPC Target product. You can perform host-target TCP/IP communication *only* if the target computer has an installed network adapter/board with one of the supported chips (see *Supported Ethernet Chips*).

This document groups the supported chips by TCP/IP driver name to indicate the family of chips compatible with the specified driver. For each target you define in xPC Target Explorer, a driver (e.g., I8254x) is selected from the “TCP/IP target driver” list entries on the target’s Communication pane. You can define multiple targets, each having different host-target configuration settings.



xPC Target Explorer's TCP/IP target driver list.

Chips are identified by a Vendor ID, Device ID pair. For example, an Ethernet adapter with the Intel 82551QM chipset has the pair (Vendor ID, Device ID) of (0x8086, 0x1059). To confirm xPC Target support for an adapter, you must determine its chipset Vendor ID, Device ID pair and verify it is in the *Supported Ethernet Chips* list provided below. You can obtain this information from one of the following:

- Board manufacturer.
- PCI vendor and device list database (www.pcidatabase.com).
- xPC Target function `getxpcpci`.

To use the latter method, create an xPC Target boot disk configured with RS-232 as the host-target communication protocol. Connect the host computer and target computer with a null modem cable, then boot the target computer. Enter

¹ ISA boards having NE2000 and SMC91C9X chips are also supported.

getxpcpci('all') in the MATLAB Command Window. In the resulting display, look for the “Ethernet Controller” section (or sections if your target computer has more than one Ethernet adapter). For example

```
>> getxpcpci('all')
```

```
List of installed PCI devices:
```

```
Intel          *****
  Bus 0, Slot 0, IRQ 0
  Host Bridge
  VendorID 0x8086, DeviceID 0x7190, SubVendorID 0x0000, SubDeviceID 0x0000
```

```
Intel          *****
  Bus 0, Slot 1, IRQ 0
  PCI-to-PCI Bridge
  VendorID 0x8086, DeviceID 0x7191, SubVendorID 0x0000, SubDeviceID 0x0000
```

```
Intel          *****
  Bus 0, Slot 8, IRQ 10
  Ethernet Controller
  VendorID 0x8086, DeviceID 0x1209, SubVendorID 0x8086, SubDeviceID 0x0000
```

```
*****          *****
  Bus 1, Slot 0, IRQ 9
  VGA Controller
  VendorID 0x102c, DeviceID 0x00c0, SubVendorID 0x102c, SubDeviceID 0x00c0
```

In this example, the Ethernet adapter chipset pair (Vendor ID, Device ID) is (0x8086, 0x1209). In the *Supported Ethernet Chips* list, you’ll find this pair under the I82559 driver section; hence, the adapter is supported and will be recognized by the xPC Target kernel by selecting the I82559 TCP/IP target driver in xPC Target Explorer. If you have only one Ethernet adapter in your target computer, it is recommended that you select “Auto” for the TCP/IP target driver. Once you have made this selection, create an xPC Target boot image/disk using TCP/IP as the host-target communication protocol. Along with the other TCP/IP options, ensure the target driver is correctly set before building the boot image/disk. The xPC Target kernel will automatically search for the supported adapter during the boot process and load the appropriate driver.

Supported Ethernet Chips

Driver: NE2000 (Novell Ethernet 2000 series)

Vendor ID	Device ID	Description	First Supported
0x10EC	0x8029	Realtek 10 Mbit NE2000 compatible (Realtek 8129 based)	R12
0x1050	0x0940	Winbond 89C940 NE2000 compatible	R12
0x1050	0x5A5A	Winbond 89C940 NE2000 compatible	R2006a+
0x8C4A	0x1980	Winbond 89C940 NE2000 compatible (mis-programmed chip)	R2006a+
0x11F6	0x1401	Compex RL2000 NE2000 compatible	R2006a+
0x8E2E	0x3000	KTI ET32P2 NE2000 compatible	R2006a+
0x4A14	0x5000	NetVin NV500SC NE2000 compatible	R2006a+
0x1106	0x0926	VIA 86C926 NE2000 compatible (Amazon PCI Ethernet Controller)	R2006a+
0x10BD	0x0E34	SureCom NE34 NE2000 compatible	R2006a+
0x12C3	0x0058	Holtek HT80229 NE2000 compatible	R2006a+
0x12C3	0x5598	Holtek HT80229 NE2000 compatible	R2006a+

Driver: I82559 (Intel 10/100 Ethernet series)

Vendor ID	Device ID	Description	First Supported
0x8086	0x1030	82559 In Business Card	R13
0x8086	0x1031	82801CAM	R2006a+
0x8086	0x1032	82801CAM	R2006a+
0x8086	0x1033	82801CAM	R2006a+
0x8086	0x1034	82801CAM	R2006a+
0x8086	0x1035	82801CAM	R2006a+
0x8086	0x1036	82801CAM	R2006a+
0x8086	0x1037	82801CAM	R2006a+
0x8086	0x1038	82801CAM	R2006a+
0x8086	0x1039	82562ET	R2006a+
0x8086	0x103A	82562ET	R2006a
0x8086	0x103B	82562ET	R2006a+
0x8086	0x103C	82562ET	R2006a+
0x8086	0x103D	82562ET	R2006a+
0x8086	0x103E	82562ET	R2006a+
0x8086	0x1050	82562EZ	R2006a+
0x8086	0x1051	82562ET	R2006a+
0x8086	0x1052	82801EB	R2011a
0x8086	0x1053	82801EB	R2011a
0x8086	0x1055	82801EB	R2011a
0x8086	0x1059	82551QM	R2006a+
0x8086	0x1064	82562EZ	R2006a+
0x8086	0x1065	82562EZ	R2011a
0x8086	0x1066	82562EM	R2011a
0x8086	0x1067	82562EM	R2011a
0x8086	0x1068	82801FBM	R2006a+
0x8086	0x1069	82562EM	R2011a
0x8086	0x1092	82562GZ	R2011a
0x8086	0x1094	82562G	R2011a
0x8086	0x1209	82559ER	R13
0x8086	0x1229	82559	R13
0x8086	0x2449	82562	R14

Driver: I82559 (Intel 10/100 Ethernet series) - Continued

Vendor ID	Device ID	Description	First Supported
0x8086	0x2459	82559B	R2011a
0x8086	0x245D	82559C	R2011a
0x8086	0x27DC	82562V	R2011a

Driver: RTLANCE (AMD PCnet-FAST Ethernet series)

Vendor ID	Device ID	Description	First Supported
0x1022	0x2000	AM79c971	R13

Driver: R8139 (Realtek R8139 series)

Vendor ID	Device ID	Description	First Supported
0x10EC	0x8129	Realtek RTL 8129 Fast Ethernet	R2006a+
0x10EC	0x8139	Realtek RTL 8139 Fast Ethernet	R13
0x1113	0x1211	SMC1211TX EZCard 10/100 (RealTek RTL8139)	R13
0x1039	0x0900	SiS 900 (RealTek RTL8139) Fast Ethernet	R13
0x1039	0x7016	SiS 7016 (RealTek RTL8139) Fast Ethernet	R13
0x1186	0x1300	D-Link 530TX	R13
0x1500	0x1360	Delta Electronics 8139 10/100BaseTX	R2010a
0x4033	0x1360	Addtron Technolgy 8139 10/100BaseTX	R2010a

Driver: R8168 (Realtek Gigabit Ethernet series)

Vendor ID	Device ID	Description	First Supported
0x10EC	0x8136	RealTek RTL8169SB	R2011b
0x10EC	0x8137	RealTek RTL8104	R2012a
0x10EC	0x8167	RealTek RTL8169SC	R2011b
0x10EC	0x8168	RealTek RTL8168B	R2011b
0x10EC	0x8169	RealTek RTL8169	R2011b

Driver: 3C90x (3Com Etherlink 90x series)

Vendor ID	Device ID	Description	First Supported
0x10B7	0x9200	3c905c	R2006a+
0x10B7	0x9055	3c905B-TX	R2006a+
0x10B7	0x9005	3c900B Combo	R2006a+

Driver: 3C90x (3Com Etherlink 90x series) - Continued

Vendor ID	Device ID	Description	First Supported
0x10B7	0x1000	3c905CX-TXNM	R2006a+
0x10B7	0x9051	3c905-T4	R2006a+
0x10B7	0x9056	3c905B-T4	R2006a+
0x10B7	0x9058	3c905B Combo	R2006a+
0x10B7	0x905A	3c905B-FX	R2006a+

Driver: NS83815 (National Semiconductor 83815 series)

Vendor ID	Device ID	Description	First Supported
0x100B	0x0020	DP83815	R2006a+

Driver: I8254x (Intel Gigabit Ethernet series)

Vendor ID	Device ID	Description	First Supported
0x8086	0x1000	82542	R2006b
0x8086	0x1001	82543GC_FIBER	R2006b
0x8086	0x1004	82543GC_COPPER	R2006b
0x8086	0x1008	82544EI_COPPER	R2006b
0x8086	0x1009	82544EI_FIBER	R2006b
0x8086	0x100C	82544GC_COPPER	R2006b
0x8086	0x100D	82544GC_LOM	R2006b
0x8086	0x100E	82540EM	R2006b
0x8086	0x100F	82545EM_COPPER	R2006b
0x8086	0x1010	82546EB_COPPER	R2006b
0x8086	0x1011	82545EM_FIBER	R2006b
0x8086	0x1012	82546EB_FIBER	R2006b
0x8086	0x1013	82541EI	R2006b
0x8086	0x1014	82541ER_LOM	R2010a
0x8086	0x1015	82540EM_LOM	R2006b
0x8086	0x1016	82540EP_LOM	R2006b
0x8086	0x1017	82540EP	R2006b
0x8086	0x1018	82541EI_MOBILE	R2006b

Driver: I8254x (Intel Gigabit Ethernet series) – Continued

Vendor ID	Device ID	Description	First Supported
0x8086	0x1019	82547EI	R2006b
0x8086	0x101A	82547EI_MOBILE	R2010a
0x8086	0x101D	82546EB_QUAD_COPPER	R2006b
0x8086	0x101E	82540EP_LP	R2006b
0x8086	0x1026	82545GM_COPPER	R2006b
0x8086	0x1027	82545GM_FIBER	R2006b
0x8086	0x1028	82545GM_SERDES	R2006b
0x8086	0x1049	ICH8_IGP_M_AMT	R2010a
0x8086	0x104A	ICH8_IGP_AMT	R2010a
0x8086	0x104B	ICH8_IGP_C	R2010a
0x8086	0x104C	ICH8_IFE	R2010a
0x8086	0x104D	ICH8_IGP_M	R2010a
0x8086	0x105E	82571EB_COPPER	R2008b
0x8086	0x105F	82571EB_FIBER	R2008b
0x8086	0x1060	82571EB_SERDES	R2008b
0x8086	0x1075	82547GI	R2006b
0x8086	0x1076	82541GI	R2006b
0x8086	0x1077	82541GI_MOBILE	R2006b
0x8086	0x1078	82541ER	R2006b
0x8086	0x1079	82546GB_COPPER	R2006b
0x8086	0x107A	82546GB_FIBER	R2006b
0x8086	0x107B	82546GB_SERDES	R2006b
0x8086	0x107C	82541GI_LF	R2006b
0x8086	0x107D	82572EI_COPPER	R2008b
0x8086	0x107E	82572EI_FIBER	R2008b
0x8086	0x107F	82572EI_SERDES	R2008b
0x8086	0x108A	82546GB_PCIE	R2006b
0x8086	0x108B	82573E	R2008b
0x8086	0x108C	82573E_IAMT	R2008b
0x8086	0x1096	80003ES2LAN_COPPER_DPT	R2008b
0x8086	0x1098	80003ES2LAN_SERDES_DPT	R2008b
0x8086	0x1099	82546GB_QUAD_COPPER	R2008b

Driver: I8254x (Intel Gigabit Ethernet series) – Continued

Vendor ID	Device ID	Description	First Supported
0x8086	0x109A	82573L	R2008b
0x8086	0x10A4	82571EB_QUAD_COPPER	R2010a
0x8086	0x10A5	82571EB_QUAD_FIBER	R2010a
0x8086	0x10B5	82546GB_QUAD_COPPER_KSP3	R2008b
0x8086	0x10B9	82572EI	R2008b
0x8086	0x10BA	80003ES2LAN_COPPER_SPT	R2010a
0x8086	0x10BB	80003ES2LAN_SERPES_SPT	R2010a
0x8086	0x10BC	82571EB_QUAD_COPPER_LP	R2010a
0x8086	0x10BD	ICH9_IGP_AMT	R2010a
0x8086	0x10BF	ICH9_IGP_M	R2010a
0x8086	0x10C0	ICH9_IFE	R2010a
0x8086	0x10C2	ICH9_IFE_G	R2010a
0x8086	0x10C3	ICH9_IFE_GT	R2010a
0x8086	0x10C4	ICH8_IFE_GT	R2010a
0x8086	0x10C5	ICH8_IFE_G	R2010a
0x8086	0x10CB	ICH9_IGP_M_V	R2010a
0x8086	0x10CC	ICH10_R_BM_LM	R2010a
0x8086	0x10CD	ICH10_R_BM_LF	R2010a
0x8086	0x10CE	ICH10_R_BM_V	R2010a
0x8086	0x10D3	82574L	R2010a
0x8086	0x10D5	82571PT_QUAD_COPPER	R2010a
0x8086	0x10D9	82571EB_SERDES_DUAL	R2010a
0x8086	0x10DA	82571EB_SERDES_QUAD	R2010a
0x8086	0x10DE	ICH10_D_BM_LM	R2010a
0x8086	0x10DF	ICH10_D_BM_LF	R2010a
0x8086	0x10E5	ICH9_BM	R2010a
0x8086	0x10EA	PCH_M_HV_LM	R2011a
0x8086	0x10EB	PCH_M_HV_LC	R2011a
0x8086	0x10EF	PCH_D_HV_DM	R2011a
0x8086	0x10F0	PCH_D_HV_DC	R2011a
0x8086	0x10F5	ICH9_IGP_M_AMT	R2010a
0x8086	0x10F6	82574LA	R2011a

Driver: I8254x (Intel Gigabit Ethernet series) – Continued

Vendor ID	Device ID	Description	First Supported
0x8086	0x1501	ICH8_82567V_3	R2011a
0x8086	0x150C	82583V	R2011a
0x8086	0x294C	ICH9_IGP_C	R2010a

Driver: Rhine (VIA VT6105L PCI Ethernet series)

Vendor ID	Device ID	Description	First Supported
0x1106	0x3106	VT6105L_Rhine_III	R2009a
0x1106	0x3053	VT6105L_2_Rhine_III	R2009a
0x1106	0x2006	VT6105_Rhine_III	R2009a
0x1106	0x3065	VT8235_Rhine_II	R2009a
0x1106	0x6100	VT86C100A_Rhine_II	R2009a
0x1106	0x3043	VT86C100A_2_Rhine_II	R2009a

USB Adapters

The xPC Target kernel also provides for host-to-target computer communication using USB Ethernet adapters. To configure for USB host-target communication, in xPC Target Explorer, do the following:

- Set TCP/IP target bus to USB.
- Set TCP/IP target driver to USBAX772, USBAX172, or Auto.

Or from the MATLAB command line, enter the following commands:

```
>> setxpcenv('TcpIpTargetBusType','USB') and
>> setxpcenv('TcpIpTargetDriver','USBAX772'), or
>> setxpcenv('TcpIpTargetDriver','USBAX172'), or
>> setxpcenv('TcpIpTargetDriver','Auto')
```

If you set the target driver to Auto, the software defaults the target driver to USBAX772, the driver most commonly used. Supported USB adapters are listed below.

Driver: USBAX772 (ASIX AX88772 10/100Mbs Ethernet series)

Vendor	Model	Description	First Supported
ASIX	AX88772	USB, 10/100Mbs	R2011b

Driver: USBAX172 (ASIX AX88172 10/100Mbs Ethernet series)

Vendor	Model	Description	First Supported
ASIX	AX88172	USB, 10/100Mbs	R2011b