

# MiiNePort E2-SDK

## MiiNePort E2 software development kit



- Eclipse-based integrated software development tool
- Source level debugger
- Various serial-to-Ethernet sample codes
- Mass production tool for easy firmware upload
- Support Real COM mode operation functions



### Overview

MiiNePort E2-SDK is a powerful and versatile software suite for proprietary firmware development on the MiiNePort E2. To expedite time-to-market, the MiiNePort E2-SDK provides comprehensive tools for development, testing, and mass production. The software development kit includes:

**MiiNePort-IDE**—integrated platform for development of serial-to-Ethernet firmware.

**PComm Lite**—software application for testing serial and TCP/IP communication/transmission.

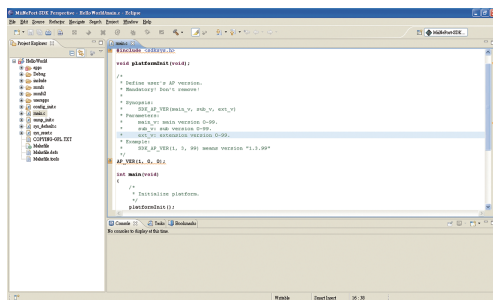
**Search Utility**—search-and-update firmware utility for mass production of modules and serial devices through simultaneous multiple-unit configurations.

### MiiNePort-IDE (Eclipse-based Software Development Tool)

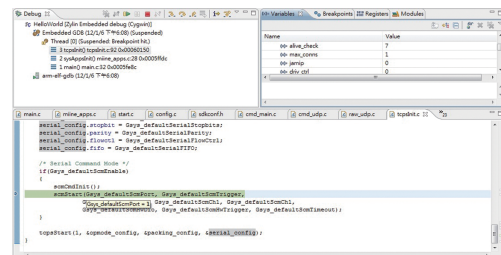
The MiiNePort-IDE is an Eclipse-based platform which includes a powerful source code editor, C/C++ compiler, and source-level debugger tool. The MiiNePort-IDE also offers wizard assistance for step-by-step development of SNMP, Telnet, configuration, and

application functions. In addition, serial-to-Ethernet sample codes are provided for reference to assist in firmware development. For complex operating modes, such as RealCOM and Ethernet modem, MiiNePort-IDE offers ready-to-run firmware with minimal configuration required.

### Friendly Interface



### Source-Level Debugging



### Specifications

#### System Information

- CPU:** 32-bit ARM Core
- RAM:** 4 MB built in
- Flash:** 2 MB built in

#### Ethernet Interface

- Number of Ports:** 1
- Speed:** 10/100 Mbps, auto MDI/MDIX
- Magnetic Isolation Protection:** 1.5 kV built-in

## Serial Interface

**Number of Ports:** 1

**Transmission Format:** Standard TTL

## Digital I/O Pins

**GPIO:** 4 configurable I/O pins

## Software

**OS:** eCos

**Software Development Tool:** MiiNePort-IDE

**Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded

**Fixed TTY Drivers:** SCO Unix, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X

**Linux Real TTY Drivers:** Linux 2.4.x, 2.6.x, 3.x, 4.x

**Android API:** Android 3.1.x and later

**Operation Modes:** Real COM, Ethernet Modem

**Wizard:** Project/SNMP/CLI(Telnet)/SCM/User Configuration

**Serial/Ethernet Test Tool:** PComm Lite (Serial/TCP Server/TCP Client)

**Search/Upload Firmware Utility:** NPort Search Utility

## Serial to Ethernet Sample Source Code

(Integrated in MiiNePort-IDE):

1. TCP Server Echo
2. TCP Server to Serial (Single connection)
3. TCP Server to Serial (Multi-connection)
4. TCP Client Echo
5. TCP Client to Serial (Startup)
6. TCP Client to Serial (Any character)
7. TCP Client to Serial (Designed destination TCP/IP port from serial)
8. UDP echo
9. UDP to serial

## Environmental Limits

**Operating Temperature:**

Standard Models: 0 to 55°C (32 to 131°F)

Wide Temp. Models: -40 to 85°C (-40 to 185°F)

**Storage Temperature (package included):** -40 to 60°C (-40 to 140°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

## Power Requirements

**Input Voltage:** 3.3 to 5 VDC

**Input Current:** 140 mA @ 3.3 VDC

## Standards and Certifications

**EMC:** EN 55022/24

**EMI:** CISPR 22, FCC Part 15B Class B

**EMS:**

IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV

IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m

IEC 61000-4-4 EFT: Power 1 kV; Signal 0.5 kV

IEC 61000-4-5 Surge: Power 2 kV; Signal: 0.5 kV

IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m Signal: 3 V/m

IEC 61000-4-8 PFMF

IEC 61000-4-11

**Drop:** IEC 60068-2-34

IEC 60068-2-32, ISTA-2A

## Reliability

**MTBF (mean time between failures):**

Time: 2,463,960 hrs

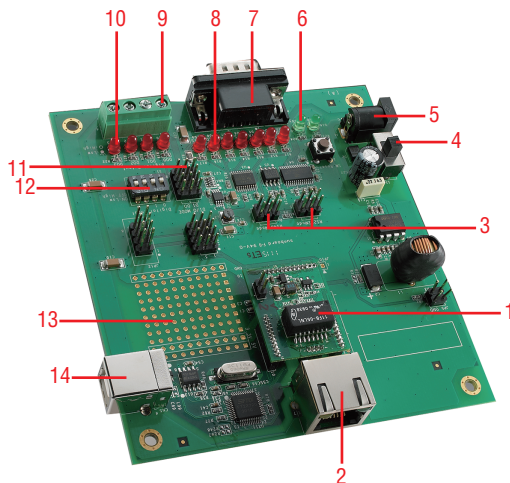
Standard: Telcordia (Bellcore) TR/SR

## Warranty

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

## Hardware Evaluation Board



Number	Description
1	MiiNePort E2-SDK Module, 2 MB Flash and 4 MB RAM built in
2	10/100M Ethernet RJ45 Connector
3	Serial Interface Jumper
4	Power Switch
5	Power Jack, 12 to 48 VDC
6	Power & Ready LED
7	RS-232 DB9 Male Connector
8	Serial Port Status LED
9	Digital IO Terminal Block
10	Digital Output LED
11	Digital Input/Output Mode
12	Digital Input Switch
13	Circuit Pad
14	USB Type B Connector (Debug)

## Ordering Information

### Available Modules

**MiiNePort E2-SDK:** Software development kit for the MiiNePort E2 Series, MiiNePort E2 module included

**Note:** For a list of applicable modules available for order, please refer to the MiiNePort E2 datasheet.

### Optional Accessories (can be purchased separately)

**PWR-12125-DT-S1:** Desktop power supply (requires power cord), 12 VDC, 1.25 A, 100 to 240 VAC

**PWC-C7US-2B-183:** 10A/125V US power cord, 183 cm

**PWC-C7EU-2B-183:** 2.5A/250V Continental European (EU) power cord, 183 cm

**CBL-F9M9-150:** DB9 female to DB9 male serial cable, 150 cm

**CBL-RJ458P-100:** 8-pin RJ45 CAT5 Ethernet cable, 100 cm

**CBL-USBA/B-100:** USB Type A to USB Type B cable, 100 cm

### Package Checklist

- MiiNePort E2-SDK module
- MiiNePort E2-SDK evaluation board
- Universal power adapter
- Power Cord: PWC-C7US-2B-183
- Power Cord: PWC-C7EU-2B-183
- USB Cable: CBL-USBA/B-100
- Serial Cable: CBL-F9M9-150
- Ethernet Cable: CBL-RJ458P-100
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card