

#### Before Getting Started

Use this document for quick installation and setup. If you experience problems or need more information, see the *UWBTracer User Manual* on the Installation CD or at the LeCroy web site. For details about the latest software version, see the *Readme.txt* file on the Installation CD.

## 1 Host Machine PC Requirements

The *UWBTracer* analyzer is controlled and operated through a software application that you must install and run on a Windows-based PC (the host machine). The requirements for the host machine are:

**Operating System:** Microsoft® Windows® 2000 or XP.

**Browser:** Microsoft Internet Explorer, version 5 or newer.

**Processor:** Intel® Pentium® 4, AMD Athlon™/AMD Duron™, or newer compatible processors with clock speed of at least 2 GHz.

**Memory:** Minimum is 512MB of RAM. For best performance, use physical RAM at least as large as the size of the recording buffer, up to 2 GB. To find and set the size, see the Recording Options section.

**Hard Disk:** 20 MB of free hard disk space is required for installation. Additional disk space is needed for operation of applications and for storing recorded data in files, each of which can be as much as 2 GB. Hard disks with fast access times are recommended.

**Display:** Resolution of at least 1024 x 768 with 24-bit color depth is recommended (resolution of 800 x 600 with 16-bit color is a minimum).

**Connectivity:** For high-speed uploads, a USB 2.0 interface is recommended (USB 1.1 is a minimum). Not required if the application is used only to view pre-recorded traces.

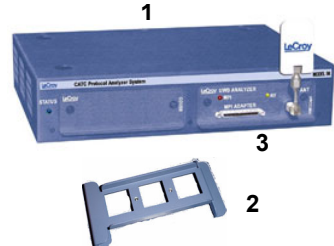
Please see the **Readme** file on the installation CD for the latest information on PC requirements.

## 2 Components

The *UWBTracer* basic components are:

- Installation CD-ROM [not shown]
- CATC 5K Platform [1]  
shown with the UWB Analyzer Plug-in Module plugged in
- Power Supply [not shown]
- Vertical Stand [2]
- UWB Analyzer Plug-in Module [3]
- Antenna [4]
- RF Coaxial Cable (SMA) [5]
- Synchronization Cable [6]
- Trigger Cable [7]
- USB Cable [not shown]
- Carrying Case (optional) [not shown]

CATC 5K and Stand



UWB Analyzer Plug-in Module



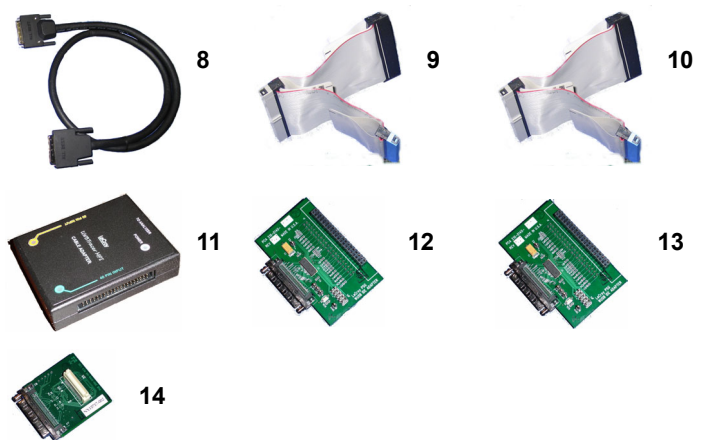
Standard Cables



The optional MPI Kit includes:

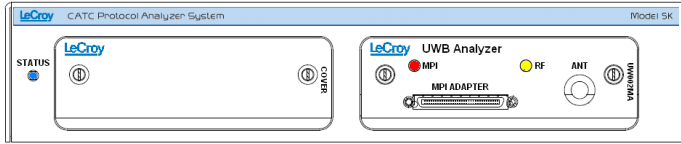
- Adapter Cable (SCSI) [8]
- Probe Cable for IDE 40-pin Connectors and Hirose 68-pin Connectors [9]
- Probe Cable for IDE 40-pin Connectors and Hirose 68-pin Connectors [10]
- Cable Adapter for Hirose 68-pin or IDE 40-pin Connectors [11]
- Board Adapter for IDE 40-pin Connectors [12]
- Board Adapter for Hirose 68-pin Connectors [13]
- Board Adapter for Hirose 60-pin Connectors [14]

MPI Kit



Please see the *UWBTracer User Manual* on the installation CD for component specifications.

### 3 Front Panel Description



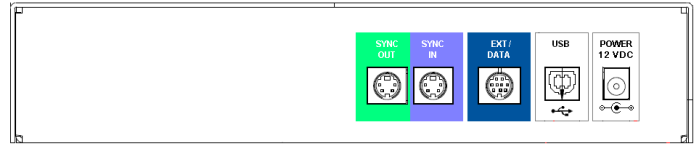
#### STATUS (status of the platform)

LED	Description
No light	System is not powered on
Green Blink Slow	Initializing
Blue	System is operational
Red Blink Fast	System fault (contact Support)

#### MPI/RF (status of the MPI or RF channel)

LED	MPI Channel	RF Channel
No light	Does not detect PCLK or PHY_ACTIVE	Does not detect wireless frames
Yellow Blink Fast	Trying to synchronize to MPI traffic and waiting for PCLK and PHY_ACTIVE	Trying to synchronize to RF traffic and waiting for wireless traffic
Yellow	Synchronized: Capturing MPI traffic with PHY_ACTIVE signal high	Synchronized: Capturing wireless frames
Red Blink Slow	Recording Pre-Trigger traffic	Recording Pre-Trigger traffic
Red	Recording Post-Trigger MPI traffic	Recording Post-Trigger wireless traffic

### Rear Panel Description



#### SYNC IN / OUT

For synchronized multi-analyzer operation, the analyzers must be connected in a daisy-chain topology to each other using the Green/Purple cable.

#### EXT DATA

For attaching the TRIG-IN/TRIG-OUT BNC Y-cable to external instruments

#### HOST

For connecting the analyzer through USB to the host machine

#### POWER 12VDC

For connecting the external power supply to the analyzer.

**Note:** There is no power switch on the analyzer.

**Warning:** Do not open the CATC 5K enclosure. No operator serviceable parts are inside. Refer servicing to LeCroy.



#### MPI ADAPTER

Connector to MPI Adapter

#### ANT

SMA connector for antenna

### 4 Installing the Software

- If you have the Installation CD, put it in the CD drive on the host machine. The installation software should run automatically. Select the **Install** software window, then select **UWBTracer**.  
**OR**  
If you install from the web site, download the **setup.exe** file. Go to the directory where you saved the file and open the file to run the installation program.
- Follow the on-screen instructions. The *UWBTracer* software installs on the PC hard disk.

### 5 Setting Up the Analyzer

**Note:** You must install the software before connecting the analyzer to the host machine for the first time.

To set up the analyzer:

- Remove the *UWBTracer* analyzer from the shipping container or carrying case.
- Connect the analyzer unit to the external power supply. Connect the power supply to a 100V–240V, 50Hz–60Hz, power outlet using the provided power cord.  
At power-on, the Status LED of the CATC 5K platform turns green and remains on 20 seconds while the analyzer performs self-diagnosis.  
If the diagnostics pass, the Status LED turns blue.  
If the diagnostics fail, the Status LED blinks red to indicate hardware failure. If this occurs, call Customer Support.

- Connect the USB cable between the **HOST** USB port on the back of the analyzer and a USB port on the PC. The host operating system detects the analyzer and begins to install the USB driver.
- Step through the Microsoft® Windows® hardware wizard. The wizard automatically installs *UWBTracer* as a USB device on the PC. The required USB driver files **catc5k.sys** and **uwb5k.sys** were placed in the correct directory during software installation.

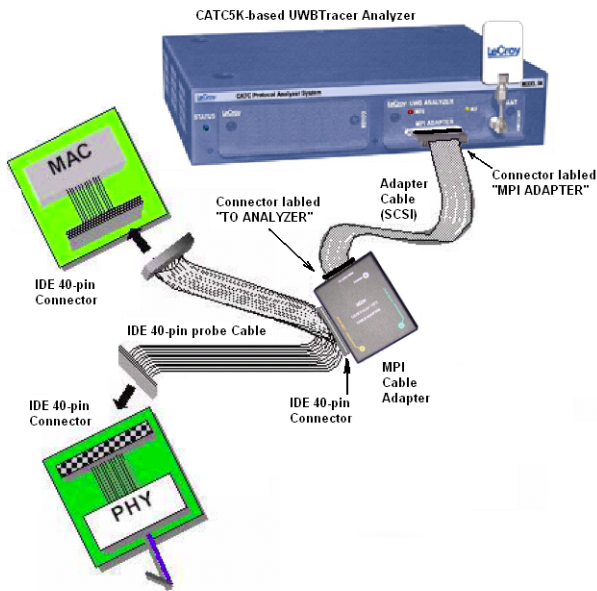


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## Preparing for MPI Recording

### If using the Cable Adapter:

1. If not already powered OFF, power OFF the CATC 5K analyzer and the device under test (DUT).
2. Connect one side of the adapter cable (SCSI) to the UWB Analyzer plug-in connector labeled **TO ADAPTER**.
3. Connect the other side of the adapter cable to the cable adapter connector labeled **MPI ANALYZER**.
4. Connect the middle connector of the chosen probe cable to the respective connector in the cable adapter (either labeled **68 PIN INPUT** or **40 PIN INPUT**).



**Note:** For connector 68-pin and 40-pin assignments, see the "Specification" appendix of the *UWBTracer User Manual*.

5. Connect one side of the probe cable to the connector at your PHY system. Connect the other side of the probe cable to the connector at the MAC system.

### If using one of the Board Adapters:

1. If not already powered OFF, power OFF the CATC 5K analyzer and the device under test (DUT).
2. Connect the one side of the board adapter cable (SCSI) to the UWB Analyzer plug-in connector labeled **MPI ADAPTER**.
3. Connect the other side of the adapter cable to the board adapter cable connector.
4. Mount the board adapter to the MPI subsystem connector (IDE 40-pin, Hirose 68-pin, or Hirose 60-pin).
5. Mount the PHY subsystem board onto the MPI board adapter so that the board adapter is between the two subsystems.

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## Starting the Application

To start the application, launch the **LeCroy UWBTracer** program:

**Start > Programs > LeCroy > UWBTracer > LeCroy UWBTracer**

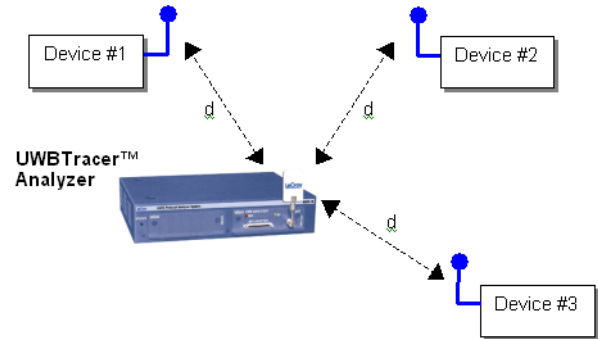
The *UWBTracer* program opens.

**Note:** You can use the software with or without the analyzer connected to the host. Without the analyzer, the program functions as a trace viewer to view, analyze, and print trace files.

## Preparing for Wireless Recording

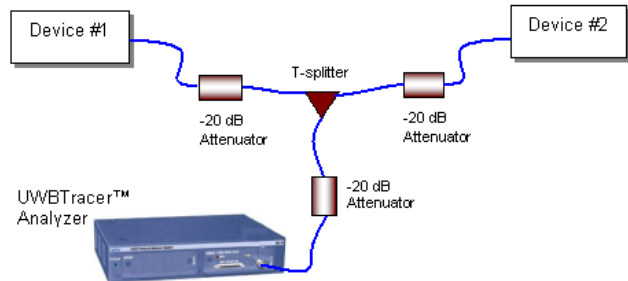
### For wireless recording:

1. Make sure the antenna provided with the *UWBTracer* analyzer is tightly connected to the connector marked **ANT**.
2. Position the analyzer and devices under test at an equal distance from each other, 10 inches apart.



**Note:** RF signals and noise from external devices might affect wireless recording, as might the transmit and receive patterns of antennas. If the recorded trace has many corrupted UWB frames, try different positions of the devices and analyzer and place the devices and analyzer as close as possible to each other (but not less than 10 inches apart).

**Wired Recording:** You can use coaxial cabling to connect the wireless device and analyzer, as illustrated below. Because antennas are not used, external interference should not affect the recording.

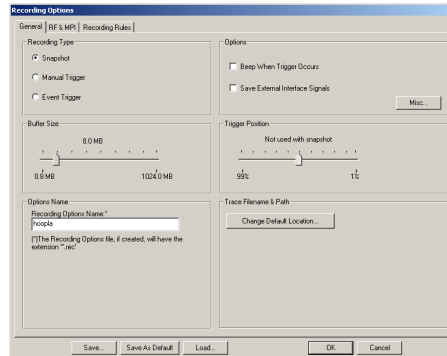
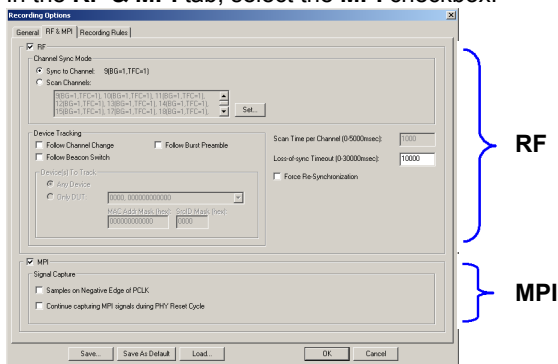


## Making Your First Recording

After installation, the software is configured for 16-MB Snapshot recording, a common setup. To change the default settings, refer to the "Recording Options" chapter of the *UWBTracer User Manual*.

### Set Recording Options for MPI Recording

1. Check that the analyzer is properly connected to the adapter and that the adapter is properly connected to the DUT.
2. Open the *UWBTracer* application and select **Setup > Recording Options** to display the Recording Options window.
3. In the **RF & MPI** tab, select the **MPI** checkbox:
4. Verify that the **Sample on Negative Edge of PCLK** checkbox is not checked. (Check if the resulting trace has excessive errors.)
5. Select the **General** tab to display the General page. The Recording Type box options determine when a recording ends. Verify that the Recording Type is Snapshot.




### Set Recording Options for RF Recording


1. Check that the analyzer is properly positioned near the DUTs and that the DUTs are operational.
2. Open the *UWBTracer* application and select **Setup > Recording Options** to display the Recording Options window.
3. In the RF & MPI tab (see above), select the **RF** checkbox.
4. Select the **Sync to Channel** checkbox. Leave the other checkboxes unselected.
5. Click the **Set** button, then verify that the selected channel is the channel on which DUTs are operating.
6. Set General options as described in steps 5 and 6 of "For MPI Recording."

**Note:** To record both MPI and RF traffic, select both the **MPI** and **RF** checkboxes.

### Start Recording

Click the **Start Recording** button  on the Tool bar or select the **Record > Start** command. After 16 MB of traffic has been recorded, the trace automatically uploads from the analyzer to the PC, and the software displays the frames.

### Stop Recording

Stop the recording by pressing the **Stop** button  on the Tool bar or selecting the **Record > Stop** command. The trace automatically uploads from the analyzer to the PC.

**Interrupting the Upload Process:** During the upload, you can interrupt upload by pressing the Stop button to display the Abort or Continue Uploading dialog box with the following options: Stop upload but keep the data that has been uploaded already, Stop upload and discard (Flush) any data that has been uploaded, or Continue upload.

### Save the Trace

After upload finishes, the software saves the recorded traffic data in the **LeCroy\UWBTracer** directory in a file named **data[sn].uwb**, where [sn] is the serial number of the CATC 5K chassis. You can change the default directory and file name by clicking the **Change Default Location** button in the Trace Filename & Path section of the General tab.

## LeCroy Customer Support

### Online Download

Periodically check the LeCroy Protocol Solutions Group web site for software updates and other support related to this product. Software updates are available to users with a current Maintenance Agreement.

Mail: 3385 Scott Blvd., Santa Clara, CA 95054-3115  
 Web: <http://www.lecroy.com/tm/Library/software/PSG>  
 E-mail: [support@catc.com](mailto:support@catc.com)  
 Tel: (800) 909-2282 (USA and Canada)  
 Tel: (408) 727-6600 (worldwide)  
 Fax: (408) 727-6622 (worldwide)

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