

CAMCO CAI TCP/IP Remote Control

This file contains install and setup instructions for the CAMCO WinCAI2004 Software and the EtherCAI-Nodes to run the CAMCO CAI TCP/IP Remote Control System.

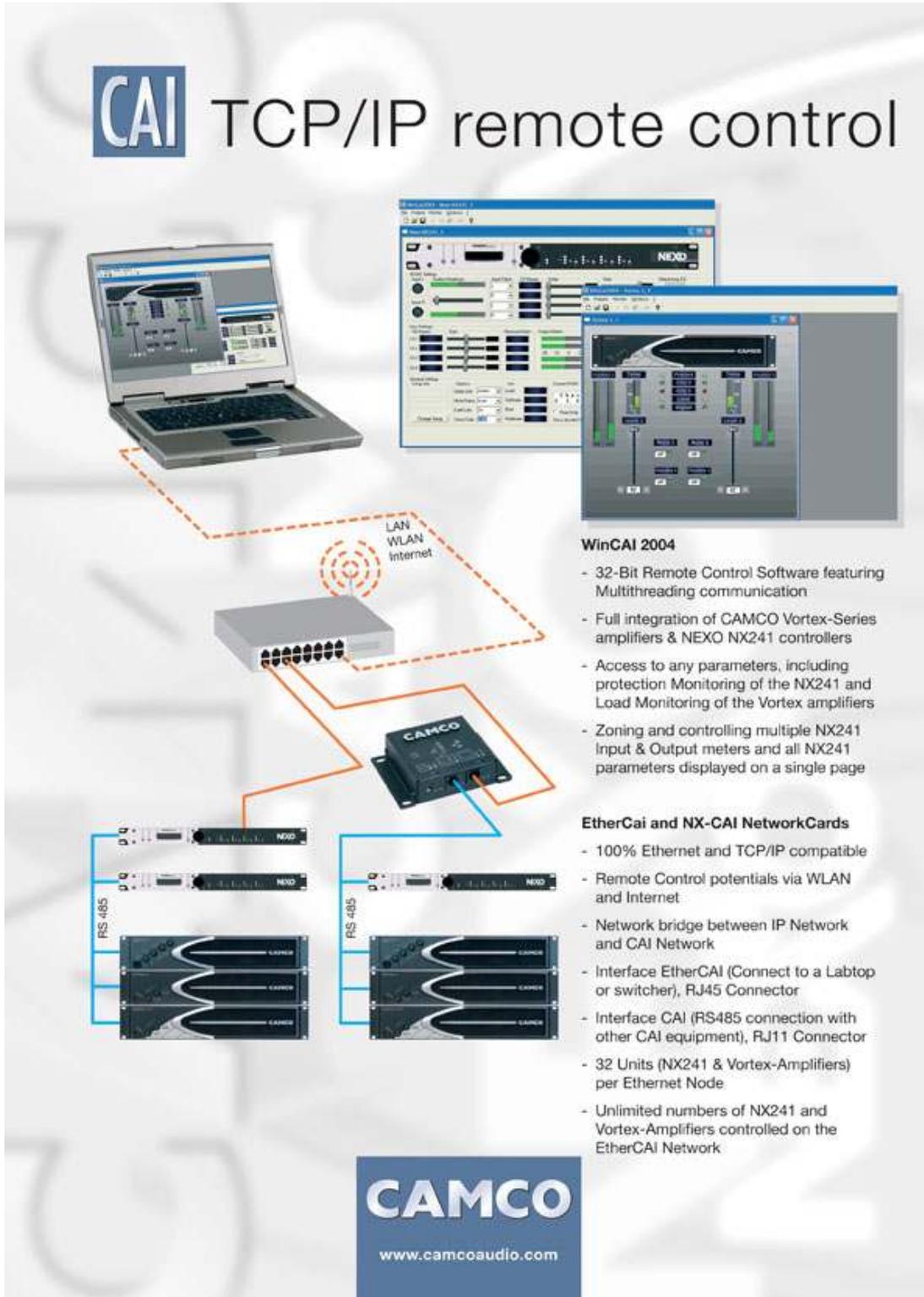
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1 System Definitions

1.1 CAI Overview



CAI TCP/IP remote control

WinCAI 2004

- 32-Bit Remote Control Software featuring Multithreading communication
- Full integration of CAMCO Vortex-Series amplifiers & NEXO NX241 controllers
- Access to any parameters, including protection Monitoring of the NX241 and Load Monitoring of the Vortex amplifiers
- Zoning and controlling multiple NX241 Input & Output meters and all NX241 parameters displayed on a single page

EtherCai and NX-CAI NetworkCards

- 100% Ethernet and TCP/IP compatible
- Remote Control potentials via WLAN and Internet
- Network bridge between IP Network and CAI Network
- Interface EtherCAI (Connect to a Laptop or switcher), RJ45 Connector
- Interface CAI (RS485 connection with other CAI equipment), RJ11 Connector
- 32 Units (NX241 & Vortex-Amplifiers) per Ethernet Node
- Unlimited numbers of NX241 and Vortex-Amplifiers controlled on the EtherCAI Network

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1.2 EtherCAI-Nodes

Two Types of EtherCAI-Nodes are currently available:

1. EtherCAI Interface Box.
2. NX.CAI Network Card.
(plug in module for the Nexo NX241/2 Digital Controller).

Note: Every EtherCAI-Node is able to control up to 32 devices.

1.3 CAI equipped devices (CED)

1. CAMCO VORTEX Amplifiers with a full integrated CAI-Interface.
2. CAMCO DX/DL Amplifiers with optional Modules.
3. NEXO NX241/2 Digital Controller with an optional Modul.

Note: Modules for the CAMCO TECTON Series Amplifiers are currently under development.

1.4 Connectivity

There are two different types of Network Connections used in the System requiring different cables and connectors:

1. RS485 cable using RJ11 connectors on the CAI-Bus (EtherCAI-Node to CAI equipped devices(CEDs)/CED to CED).
2. CAT5 cable using RJ45 connectors on the Ethernet (PC/Notebook to Router/ Router to EtherCAI-Node).

Note: RJ stands for Registered-Jack. RJ-XX is a general term for electrical connector designs registered with the US Federal Communications Commission(FCC).

2 System Requirements

1. IBM-compatible PC/Notebook running WindowsNT/2000/XP OS, equipped with a Network Interface, TCP/IP protocol installed, DHCP-Client activated.
2. Router or Switch, running a DHCP-Server.
3. One or more EtherCAI-Nodes.
4. One or more CAI equipped devices.

3 Hardware Configuration

Establish a Network connection between your PC/Notebook and the Router(please refer to section 1.1 CAI Overview of this document).

1. Connect the EtherCAI-Node to the Router.
2. Connect the CAI equipped devices to the EtherCAI-Node.
3. Switch on all units in the following order: Router, Computer, EtherCAI-Nodes, CAI equipped devices.
4. Program a unique (per EtherCAI-Node) Address into the CAI equipped devices. Please refer to the User Manual for the devices „how to program the Address“.

4 Software Installation

Please start "WCSetup.exe" and follow the instructions for the Installation.

5 Starting WinCAI 2004

Please start WinCAI2004. The "Main"- and the "Preset"-Window will now open. Please close the "Preset"-Window and go to step 5.1.

5.1 Automatic Setup of EtherCAI-Nodes

Attention! Administrator Privileges are required for Scan Operations.

1. Open the "EtherCAI-Nodes Setup"-Window (Setup/EtherCAI).
2. Click on the "Scan Devices"-Button to open the "Scan Ethernet for EtherCAI-Nodes"-Window.
WinCAI2004 checks the TCP/IP-settings of your computer and automatically provides the settings into the Address Range Fields (e.g. 192.168.10.1 - 192.168.10.245) and the destination Port Number of your EtherCAI-Node(9000 by default).
Attention! Never enter different values, unless you are aware of the effect. If you are unsure, please refer to your System administrator.
3. Press the "Scan"-Button to search available EtherCai-Nodes on your network.
4. Press the "Save"-Button to save the result.
5. Finally restart WinCAI2004 to open the EtherCAI-connections.

Note: Any change of EtherCAI-settings require a restart of WinCAI2004.

5.2 Manual Setup of EtherCAI-Nodes

5.2.1 Adding an EtherCAI-Node

1. Open the "EtherCAI-Nodes Setup"-Window (Setup/EtherCAI).
2. Select a Type of EtherCAI-Node and press the "ADD EtherCAI-Node"-Button.
3. Select the new Device and press the "Edit"-Button.
4. You must now enter the correct IP and Port Number(9000 by default) of the device and switch it "On".
5. You can change the Name of the device and the Type of EtherCAI-Node.
6. Please press the "Save"-Button.

5.2.2 Removing an EtherCAI-Node

1. Open the "EtherCAI-Nodes Setup"-Window (Setup/EtherCAI).
2. Select the Device you want to remove and press the "Remove an EtherCAI-Node"-Button.

5.2.3 Edit an EtherCAI-Node

1. Open the "EtherCAI-Nodes Setup"-Window (Setup/EtherCAI).
2. Select an Available Device and press the "Edit"-Button.
3. You must now enter the correct IP and Port Number(9000 by default) of the device and switch it "On".
4. You can change the Name of the device and the Type of EtherCAI-Node.
5. Please press the "Save"-Button.

Note: Any change of EtherCAI-settings require a restart of WinCAI2004.

5.3 Automatic Setup of CAI equipped Devices

1. Open the "Device Setup"-Window (Setup/Devices).
2. Click on the "Scan Devices"-Button to open the "Scan Devices"-Window.
3. Press the "Scan"-Button to search available Devices connected to your EtherCai-Node.
4. Press the "Save"-Button to save the result.

5.4 Manual Setup of CAI equipped Devices

5.4.1 Adding a Device

1. Open the "Device Setup"- Window (Setup/Devices).
2. Select a Type of Device and press the "ADD Device"-Button.
3. Select the new Device and press the "Edit"-Button.
4. You must now enter the correct CAI-Address, assign it to the correct EtherCAI-Node and switch it "On".
5. You can change the Name of the device, the Type of Device and the Visualisation.
6. Please press the "Save"-Button.

5.4.2 Removing a Device

1. Open the "Device Setup"-Window (Setup/Devices).
2. Select the Device you want to remove and press the "Remove Device"-Button.

5.4.3 Edit a Device

1. Open the "Device Setup"-Window (Setup/Devices).
2. Select an Available Device and press the "Edit"-Button.
3. You must now enter the correct CAI-Address, assign it to the correct EtherCAI-Node and switch it "On".
4. You can change the Name of the device, the Type of Device and the Visualisation.
5. Please press the "Save"-Button.

Your Setup is now finished.