

TICS Quickstart

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Welcome

Thank you for your purchase of the Total Interoperability Control System (TICS) component, integrated into the package. We have pre-configured and tested your TICS component, and this document will give you our default factory settings and passwords. If you have problems with the TICS component, please email ticssupport@link-comm.com, or call Link Communications for support.

-Link Communications, Inc.

Installation

Physical Installation

The TICS Platform is configured to be mounted in a standard 19" rack with at least a depth of 20". If the package wasn't ordered with a shock case, installation will be up to the user.

To install the platform, simply insert the package into the rack. Hook the rack mount tabs around the rack post. In a 2U rack space, you must skip the bottom hole, and line up the bottom of the rack mount tab with the second hole. Secure each rack mount tab with four rack screws.

Cable Configuration

The router and the notebook computer come with all the cables plugged in. Simply attach the two standard power plugs into a receptacle to apply power to the unit.

The router will have a LAN cable attached to the docking station of the notebook. The WAN port and LAN ports three and four on the router are attached to the back panel. Port two on the router will have a two foot cable included to connect to the TCB332 unit.

Router Port	Attached To:
WAN	Back Panel
LAN1	Notebook Computer
LAN2	TCB332 (cable included)
LAN3	Back Panel
LAN4	Back Panel

Dell Latitude D620 Notebook Computer

The primary element in your TICS component is a Dell Latitude D620 notebook computer. Although a computer isn't necessary for the TCB332 to work, it makes configuration much more streamlined. The basic specifications for the notebook computer are listed in the table below.

Property	Spec
Processor	Intel Core Duo 1.66GHz
RAM	1GB
Storage	40 GB Hard Drive
Optical	24x CD-ROM
Video	14.1" WXGA
Network	10/100; Dell Wireless
OS	Windows XP Professional
Warranty	Dell- 3 Year
Port Replicator	D/Port Advanced Port Replicator

Since we have pre-configured and tested the notebook computer, there are some settings and programs we use for our factory defaults. You will find these settings and programs in the following documentation.

User Names and Passwords

User Name	Password
Administrator	linkcomm
TICS User	tics

Computer Name

All computers in the TICS components have the hostname **TICSPC01**.

Date and Time

Computers are pre-configured for **Mountain Standard Time**.

TCB332 Control Software (RCI)

Control of the TCB332 is accomplished using the TCB3RCI program. This program provides a graphical user interface for you to control all the TCB332 settings. You will find shortcuts to this program on the desktop, start menu, and quick launch bar.

Support Software

Link Communications has pre-installed four programs for aiding technical support requests. You will find these programs under the directory "Link Comm Support Tools" on the start menu.

Wireshark

The first is called Wireshark. Wireshark is a network analyzer and can be used to view the packets going in and out of a selected network interface.

Tera Term Pro

The second program is Tera Term Pro. Tera Term Pro is an advanced networking client, capable of telnet and debugging sessions.

TightVNC Server

The third program is TightVNC server. Often run as a startup service, Link Communications does not register the server to run unless the user chooses to. This service is used to send a remote connection request to a tech support agent at Link Communications. The session will allow the agent to remotely view and control your computer. Once again, the session can only be initiated from the notebook computer!

WinPCap

The final program is WinPCap, which is used for Wireshark.

Wireless Networking

The D620 has a wireless card built in. Link Communications ships all computers with the wireless interface disabled. Before disabling the adapter, technicians enter the default SSID and WEP key of the package router. You can connect to any wireless networks (that you have credentials for) by enabling the interface and entering the WLAN details.

Power Management

Computers are set-up, presumably for a constant power source, and power settings reflect that. Any power settings can be changed; Link Communications recommends the default power configuration, titled TICS. The following are the default settings.

When the lid is closed, the notebook performs no action; the computer is left at the current state.

Action	On Battery	On Power Source
Turn off display:	After 5 minutes	After 15 minutes
Turn off hard drive:	After 10 minutes	Never
System Suspend	After 15	Never
Hibernate	After 20	Never

Other Programs

Link Communications has installed the VMware Player. The VMware Player will run virtual PC images, created for VMware systems. This program is used when the TICS Server is purchased and implemented. The default TICS Server load is actually a virtual machine. The TICS Server allows VoIP connectivity within the TCB332-DW package, interfacing radios and IP devices such as IP phones.

Notebook Hardware Support

All hardware issues for the D620 notebooks are handled through Dell. Each notebook has a three year warranty included.

Buffalo WHR-HP-G54 Wireless Router

The Buffalo WHR-HP-G54 Wireless Router handles all the DHCP, NAT, and routing within the package. With a small, yet powerful form-factor, the WHR-HP-G54 is a perfect addition to the TICS component. Link Communications preconfigures all routers before they leave the factory. The documentation below provides you with some of the default settings.

Router Configuration Access

The router is accessible and configurable with a web browser. To access the router page, enter **192.168.11.1** into the address bar in the web browser.

An authentication box will pop up, requiring logon credentials. The username is **root** the password is **linkcomm**. The webpage will redirect to the default router screen.

LAN

The DHCP server is configured to hand out IP addresses beginning with 192.168.11.2. Any clients connecting via the wired or wireless interfaces will be automatically assigned a dynamic IP address.

Wireless

Link Communications ships the router with the wireless functions disabled. The settings are entered in the router, the radio is simply not enabled. The router ships with the MAC address set as the default Access Point (AP) SSID. See the included stats sheet for the default SSID. Encryption is enabled via WEP. The standard WEP key is **linkcomminc01**.

Date and Time

The date and time variables are configured for **Mountain Standard Time**.

Connectivity

Within the TICS package, two LAN ports are used. The notebook uses one and the TCB332 uses the other. That leaves two LAN ports available for user specific devices. The WAN port is also left open unless a WAN option is ordered with the package.

Wireless connectivity is also available when it is enabled.

The wireless AP has an antenna attachment on the back panel. A custom antenna (RP-SMA) can be attached or the default antenna can be used.

Setting up TICS for use on an existing LAN

Although the TICS Platform is optimized to be used in a standalone, or separate network environment, it can also be used within a standard LAN with a pre-defined DHCP server. When using the TICS platform in an existing network setting, the TICS router will act as a network switch, providing the PC, the TCB and one additional port access to the network.

Caution!

Before putting the TICS platform onto a preexisting LAN, check with your network administrator for assistance. Do not make any modifications without first consulting your administrator and showing him this page.

Note the Network Administrators: The TICS package ships with a wireless router installed and preconfigured. The wireless network is disabled by default, but can be user-enabled. The default encryption is only set to 128-bit WEP, so please consider this before giving this package access to your LAN. The PC included in the package is also shipped without any Anti-Virus software, so please also make note of that before allowing the computer on your network.

Process

To use the TICS package with an existing network with a DHCP server, you must log into the TICS router and change a few configurations and also plug a network cable from the *existing network* into **LAN4** on the back of the TICS unit. Log into the router, see default router setup.

-Click on the Advanced button, located in the upper portion of the window. Link recommends that you backup your existing configuration by going to the Admin Configuration and selecting save/restore settings. Click on the Save Current Settings button and save the file to C:/Downloads.

-Now Click on LAN Config. Enter an IP address that is a currently unused address on the existing LAN. Then disable the DHCP server and click apply.

Allow WAN Users to Access and Control the TCB

By default, the Buffalo router uses a NAT-based firewall, limiting WAN access to LAN devices. At times, however, a WAN user might need access to the TCB for setup or control purposes. This is done by placing the TCB (actually its IP address) in the DMZ (demilitarized zone), giving WAN users unrestricted access to the TCB.

Caution!

Before placing the any IP Address into the DMZ, make certain that you are using the correct address, otherwise WAN users could have unrestricted access to an unauthorized machine!

Process

To put the TCB in the DMZ, Log into the router, see default router setup.

-Click on the Advanced button, located in the upper portion of the window. Link recommends that you backup your existing configuration by going to the Admin Configuration and selecting save/restore settings. Click on the Save Current Settings button and save the file to C:/Downloads.

-Now Click on Network Config. Under Network Config there are subentries, click on NAT.

-Under Advanced Settings, there is a text box labeled IP Address of DMZ. Enter the IP address of the TCB in the box and click Apply. This will probably make the router reset.

-Now you should be able to access the TCB from anywhere on the internet, using the WAN address of the router.

IP Conferencing Applications

Some users may wish to tie the TCB product into a VoIP network using IP conferencing, and the TICS platform is ideal for accomplishing this. Because the notebook computer is running Windows XP Professional, users can install conferencing servers, such as Twisted Pair's WAVE™.

Twisted Pair—WAVE™

Windows XP Professional includes IIS (web server) so the WAVE™ Management Server can be installed and used to manage multiple Media Server implementations.

The most common WAVE™ installation will most likely be WAVE™ Media Server. With Media Server, the TICS platform can connect to other Media Servers and conference channels between them.

If interested in WAVE™, contact Twisted Pair Solutions.

Technical Support

General Technical Support

For general questions regarding the TICS platform, either visit the wiki at <http://www.link-comm.com/tcbwiki> or email the TICS support team at ticssuport@link-comm.com. A member of the TICS support team will respond to your email as soon as possible.

Although Link Communications strongly recommends using the wiki or emailing the TICS support team, phone support (406.245.5002) will also be available from 8:00 am to 5:00 pm on standard business days. Link Communications reserves the right to shorten calls or refer people to other forms of support.

The TICS platform includes some technical support software tools. Please do not remove them, as they are meant to be used when working with the TICS support team to resolve any problem.

Dell Latitude Technical Support

The Dell Latitude D620 notebook computers have a three year warranty, active from the date Link Communications obtained them. Warranty issues related to the Dell Latitude D620 notebook computers will be handled through the Dell Corporation. For an extra fee, Link Communications will contact Dell on your behalf, and find a solution to your problem for an additional \$200 plus shipping both directions.

Each Dell Latitude D620 notebook computer will be shipped with the standard Dell reinstall disk and drivers. Link Communications is not responsible for software issues related to any software other than Link Communications' RCI software. If a computer becomes unusable, it is the responsibility of the owner to fix the problem. As an option, Link Communications can take a look at the Dell Latitude D620 notebook computer, and try to resolve the problem at a cost of no less than \$200 plus shipping both directions. If a re-install of Windows is needed, additional fees may apply.

Link Communications, Inc. reserves the right to change any of these policies.