

WebWay Integration - Overview

WebWay System integration improves security & reduces costs

WebWayOne and Xtralis have integrated the WebWay IP/GPRS module to provide secure Video Transmission. Historically the Adpro CCTV system devices have transmitted stored Video feeds of alarm events over to the configured monitoring centre. This has been achieved primarily over the IP network.

WebWay add savings and security as we can integrate locally with the Adpro device and then using the secure SPT (Supervised Premises Transceiver) to MCT (Monitoring Centre Transceiver) communications link. Key factors:

1. With the SPT to MCT communications a fixed WAN address is not required, the SPT always initiates communications and the MCT responds to wherever it came from.
2. Due to the outbound initiation of the SPT communications the only requirement in firewalls is for NAT to be enabled so the MCT responses are allowed back through to the SPT creating secure, successful 2-way communications
3. If the IP is in failure the site can be reached over the mobile GPRS network adding reliability to the system.

Adpro Video Systems

The following devices have been integrated to the WebWay signalling solution;

- Adpro FastTrace II
- Adpro FastTrace
- Adpro FastVu
- Adpro FastScan

Integration is via IP for FastTrace II, FastTrace, FastVu, FastTX and via a direct RS232 serial connection for FastScan. Serial connectivity requires a WebWay DTE RS232 (22-5073) Serial Module. GPRS/PSTN boards do not support Adpro Transmission.

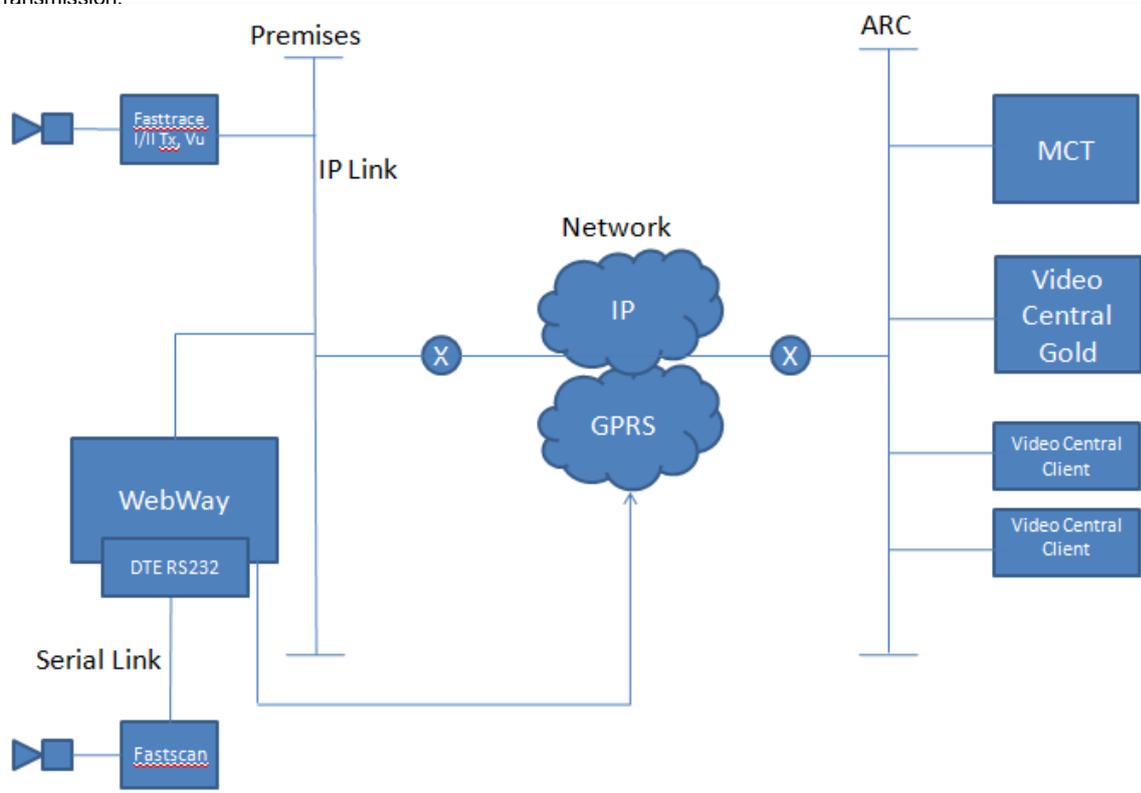
ARC Requirements

The ARC will require Video Central Gold (or Platinum for FastTrace II) server to handle incoming CCTV communications. The CCTV data comes from the WebWay to the MCT (WebWay Server at the ARC) where it is delivered to Video Central.

The connection from Video Central to the MCT is handled using a false IP address which the MCT converts to a site ID. The MCT completes an IP conversion and forwards the traffic onto the relevant WebWay unit.



FastTrace II



Adpro Series

WebWay Integration – ARC / Video Central Configuration

IMPORTANT – ARC Network Configuration

Several changes must be made in order for the WebWay Adpro Integration to work. The ARC will be required to make changes to IP routing and allocate additional IP addresses for the service before an on-site WebWay install is able to take place.

This setup assumes that the existing Video Central (VC) server and the MCT are on the same LAN and that the configuration of the LAN is typically a 192.168.x.x network.

The setup also assumes and requires that the existing LAN does not use the 10.x.x.x network overlaid on it. If a 10.X.X.X is in use then the following can be used, but all have limitations;

- 10.X.X.X – Can use 6 digit chip numbers, 100,000 connection limit
- 172.16.X.X – Can use 5 digit chip numbers with a 10,000 connection limit
- 192.168.x.x – Can use four digit chip numbers with a 1,000 connection limit

For any assistance with this queries please contact support on, 01635 231514 or support@webwayone.co.uk.

The network facing address of the ARC must be fixed with UDP port 50561 and routed to the 192.168.x.x address of the MCT. This is used for all communication between the SPT and the MCT. All communication is initiated from the SPT. Return traffic either gets back to the SPT via NAT'ing or by fixed routes as required.

The MCT is configured with its own 192.168.x.x address but it must also be assigned additional addresses on the same network which will be used for handling incoming MCT to VC connections. The number of addresses that it needs is dependent on the number of concurrent incoming VC connections that it needs to be able to support. **Typically for VC server this is 8 so the MCT will need to be assigned 9 network addresses. The additional addresses do not need to be sequential.**

Any Adpro sites that are not being handled by the WebWay system are routed to and from the VCG as normal. The WebWay setup has no impact on these.

For Adpro sites that are using the WebWay system for transporting the Adpro data:

1. They do not need to have a fixed network facing address.
2. The LAN address of the SPT and the Adpro IP transmitter must have a fixed address. DHCP cannot be used.

Ports 1600-1604 need to be opened internally for Fastrace II traffic and ports 1500-1004 for other Adpro traffic.

Outgoing connections from VC to remote site

The MCT is configured to behave like a router for all 10.x.x.x addresses. However although it looks like a router to VC the connection goes no further than the MCT. When it receives a connection request from VCG destined for a 10.x.x.x address it will handle the connection locally and take the content of the 2nd, 3rd and 4th fields of the address and use them to identify the site that VC wants to connect to. **For example if VC tried to connect to 10.12.34.56 then the MCT would identify that the connection is for site id 123456.**

Once it has this information it can instruct the appropriate remote site to establish a connection to the Adpro transmitter and relay data to and from each system. If the type of connection requires additional ports opened then these will be handled in the normal way, as controlled by VC and the transmitter, all using the same destination address to identify the session that the connections belong to.

In VC when the site is created it is configured for network connectivity and the destination IP address is entered in the form described above. Note that the site id must match the id for the site as known by the MCT. It does not need to be the same as the site id within VC. This method for 'forwarding' the site ID to the MCT will support most site ID's from 3 to 6 digits in length. However it is necessary to configure the MCT to know what the length of the site ID will be. **This means that for a particular VC/MCT installation all site ID's must be the same length.**

IMPORTANT – Windows Routing Table Changes

There is a minor change required on the VC server machine and this is to add an entry to its Windows IP routing table which configures it so that all traffic with a destination address of 10.x.x.x. is routed via the IP address of the MCT and it does not try to route it to the outside world via its default gateway or router address. This is the main 192.168.x.x network address of the MCT.

To make the routing change it is necessary to enter a command via the Windows command line interface (DOS). To open this interface select 'Run' from the 'Start' menu. In the dialogue box that is presented type in the text 'command' (without the quotes) and then select OK. This will open a command line window and you will be presented with a prompt something like:

C:\Documents and settings\username>

Now type in the following command line making changes as required:

```
route ADD <net> MASK <netmask> <destination address> METRIC 2 -p
```

Description:

[route] is command

[ADD] adds a route

<net> address range to be routed. Typically this will be 10.0.0.0

MASK defines the size of the network.

<netmask> typically this will be 255.0.0.0

<destination address> this is the address of the WebWayOne gateway. An example would be 192.168.50.21

[Metric 2] is cost for the destination

[-p] makes the routing fixed across reboots.

On receipt of data at the SPT that is destined for the Adpro transmitter, the SPT will forward it to the Adpro transmitter as if it were a normal connection. The Adpro transmitter knows no different, simply believing that the SPT is VC.



Adpro Series

WebWay Integration – ARC / Video Central Configuration

Incoming connections from Adpro to VC

When the Adpro transmitter has an alarm event to deliver to VC it will signal this to the SPT which will in turn pass it to the MCT. In other words for Adpro IP products the local SPT LAN address is the destination address that the transmitter has configured for VC. For Adpro serial products it does not matter what address the transmitter uses as long as it is a valid address format (for practical purposes it should be the address of the SPT) but it must use the correct Adpro serial destination port number which is 7250. The MCT recognizes this as a video connection request and will forward it to VC. When establishing the connection to VC it will use one of the 8 additional IP addresses assigned to it as the source address. This is necessary so that a number of concurrent connections can be achieved with each connection having its own address for the duration of the connection. Note that VC does not identify the site calling by its source IP address. For VC all site identification is done inbound within the Adpro data protocol.

GPRS operation

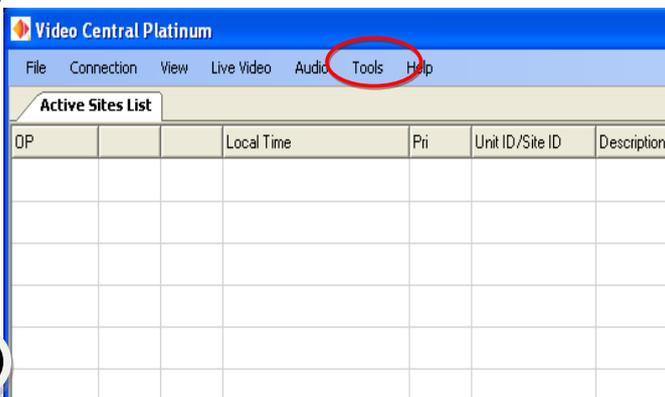
The descriptions in the guide assume that the Ethernet path from SPT to MCT is good. However if there is a failure of the Ethernet path then the SPT can provide a backup connection over its GPRS path. In this case incoming connections from the remote site to VC are handled in exactly the same way as described earlier.

For outgoing connections however the process is slightly different. GPRS connections have to be established from the 'mobile' device to the central station. Therefore if the MCT wants to establish a connection to the SPT when the transmission path is idle then it has to use another method to trigger the SPT to open the link back to the MCT. This is done using an SMS message from the MCT to the SPT. On receipt of a validated message from the MCT the SPT will open up the GPRS connection enabling the MCT to send its data and to start the session.

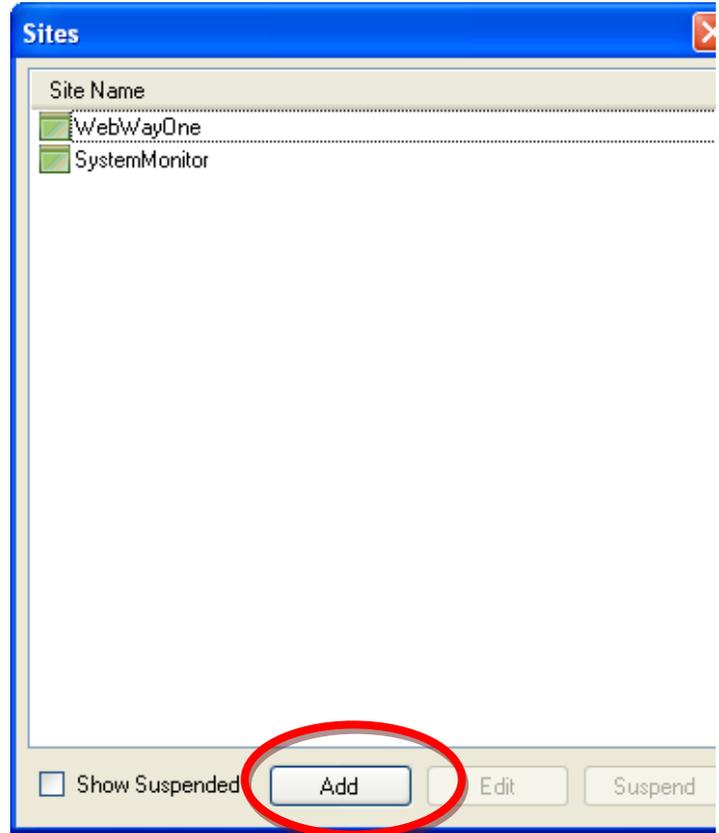
IMPORTANT – Video Central Gold / Platinum

Currently two versions of Video Central are available. Video Central Gold will only work with legacy Adpro solutions and will not operate with the FastTrace II Solution. Video Central Platinum will only operate for fast trace II units. If you intend to manage traffic from all models of Adpro then both versions of Video Central will be required.

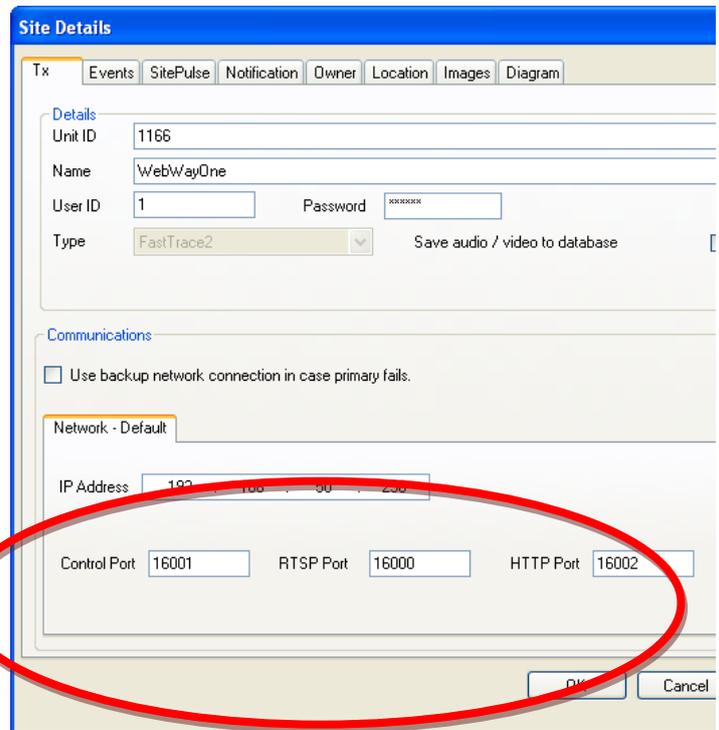
Video Central Platinum Configuration (FastTrace II Models only)



To create or modify a site, click on the Tools > Administration > Sites.



Select a site and press the Edit button or press the Add button



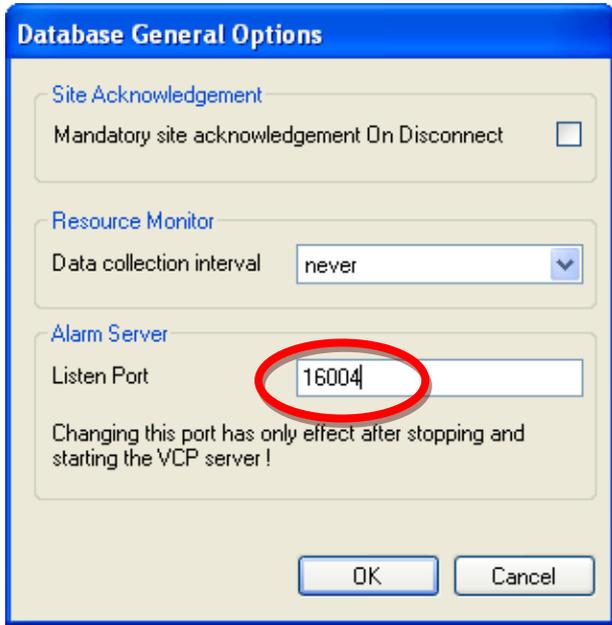
Set the IP Address field with the relevant address for the destination SPT. Set the Control Port to **16001**, the RTSP Port to **16000** and the HTTP Port to **16002**.



Adpro Series

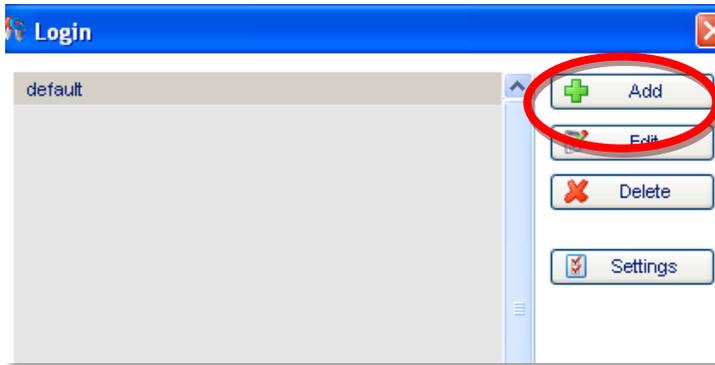
WebWay Integration – Video Central / FastTrace II Configuration

Select the Tools > Administration > Databases > General.
Modify Listen Port field to **16004**.



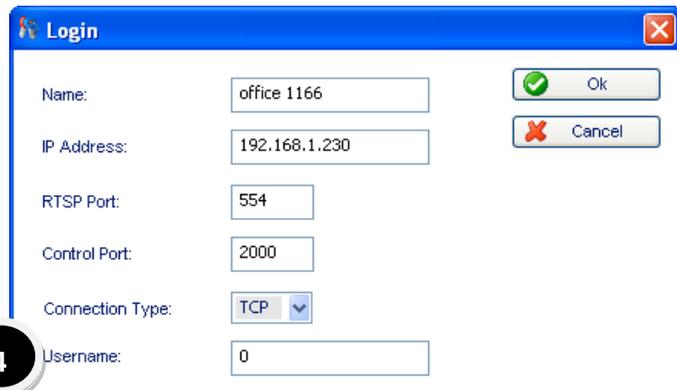
FastTrace II Configuration

Login to the FastTrace II application, To create a connection account to your site, press the Add button.

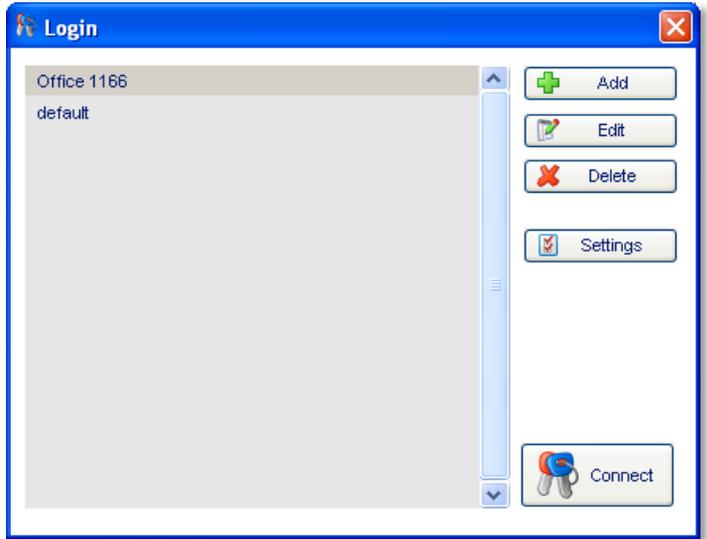


Put a description name for the site in the Name field. Insert the IP address of the FastTrace II (default is 10.0.0.10) in the IP Address field

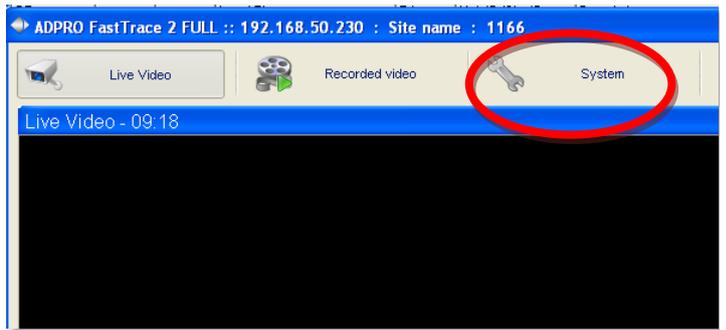
Fill in the Username (default is 0) and Password (default is 666777) fields.



Select the site/account and press the Connect button.

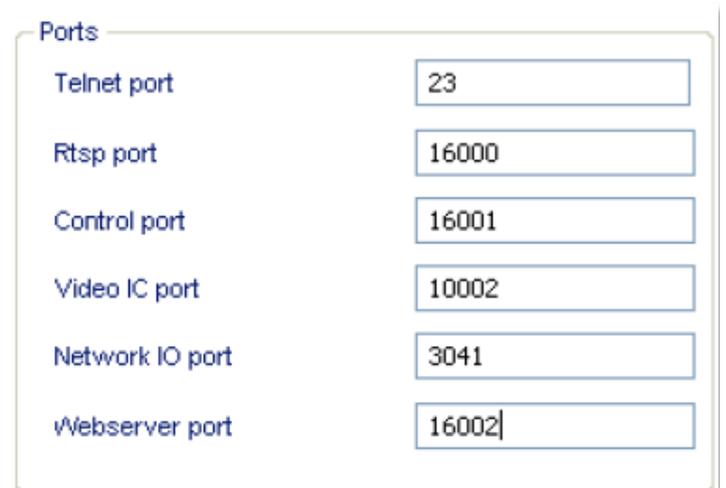


You are now connected to the FastTrace II. Press the System button to enter the configuration section.



Modify the following fields:

- Set Rtsp port to **16000**.
 - Set Control port to **16001**.
 - Set Webserver port to **16002**.
 - Set IP Address to a fixed IP address allocated by customer.
 - Set Subnet mask to mask allocated by customer.
 - Set Gateway to the IP address of the customers Gateway.
- Press the Save button.



Adpro Series

WebWay Integration – Video Central / FastTrace II Configuration

Ethernet

Mac address: 00:1c:c0:f2:68:52

Ip address: 192.168.1.230

Subnet mask: 255.255.255.0

Gateway: 192.168.1.1

Max bandwidth (kbps): 0
(0 = no limit)

Current video data: (kbps): 0

Primary Alarm Transmission

Line test (Site pulse)

None

Interval: 2 minutes

Start time: 10 : 15 : 0

Auto negotiate IP-Address (PPP):

Destination 1 Ip address: 192.168.1.170

Destination 1 Ip port: 16004

Destination 2 Ip address: 0.0.0.0

Destination 2 Ip port: 10000

On the left hand menu tree, look for and select Audio. Modify the Audio server mode to TCP and Audio server port to **16003**. Press the Save button.

Audio

Audio input and output configuration. The 1st column of the audio input section is for the camera. The 2nd column is an on the fly parameter which allows you to disable the camera without a reboot. The 3rd column is an on the fly parameter which allows you to disable the camera without a reboot.

1-8	Send live audio stream:	9-1
<input checked="" type="checkbox"/>	Camera 1	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Camera 2	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Camera 3	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Camera 4	<input type="checkbox"/>
<input type="checkbox"/>	Camera 5	<input type="checkbox"/>
<input type="checkbox"/>	Camera 6	<input type="checkbox"/>
<input type="checkbox"/>	Camera 7	<input type="checkbox"/>
<input type="checkbox"/>	Camera 8	<input type="checkbox"/>

FastTrace 2 audio output

Audio server port: 16003

Audio server mode: TCP

Full duplex mode:

General

CMS ID: 3141593 | Default | Connection Timeout (s): 10

FastTrace 2 Unit ID: 1166 | Holdtime (0=no repeat) (s): 600

Site name: Site name

Once all settings have been changed, restart the FastTrace II device so all settings can take effect.

After all settings have changed you need to reconfigure the FastTrace II application so that you can connect to the video unit next time

IMPORTANT –

If you are also supporting Fasttrace II units not signalling via the webway system Then port 16004 must be replaced with 10000 in order for both to function.

FastTrace II - Actions required on-site

1. Connect up the WebWay SPT (supervised premises transceiver) as you would for any installation as detailed in the WebWay installation guide. Auto Take-On must be performed for communications to be successful.
2. Connect up and configure the FastTrace II as detailed in its own guide.
3. Follow the details prior to ensure that the FastTrace II is configured correctly
4. The WebWay should download all necessary setup upon Auto Take-On so no additional configuration should be required.
5. Testing of equipment needs to take place.

IMPORTANT – WebWay Dip Switch 7

Dip Switch 7 on the WebWay SPT must be **ON**. Please check this before trying any CCTV activity through the WebWay.

On the left hand tree menu, look for and select Alarm Transmission. Modify Destination 1 IP address to the fixed IP address of the SPT and Set Destination 1 IP port to **16004**. Clear Destination 2 IP address to 0.0.0.0.

In the General section, modify the Connection Timeout (s) to **10**. This will allow alarm transmission over GPRS to work when connection times take longer than usual. Press the Save button.

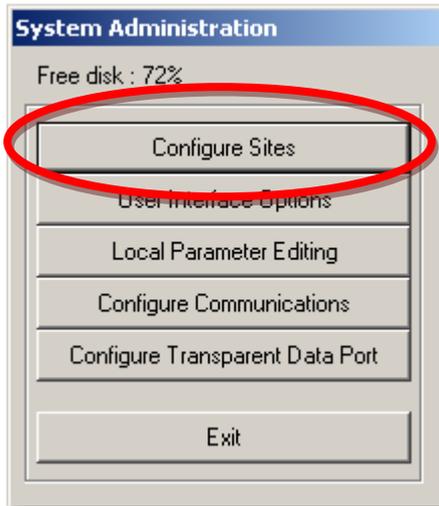


Adpro Series

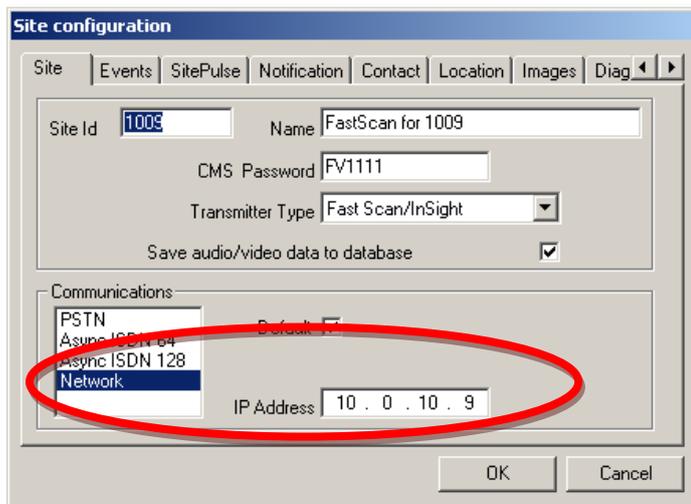
WebWay Integration – Video Central / FastTrace, Fast TX, Fast VU, FastScan

Video Central Gold Configuration

To create or modify a site, click on Database > Administration



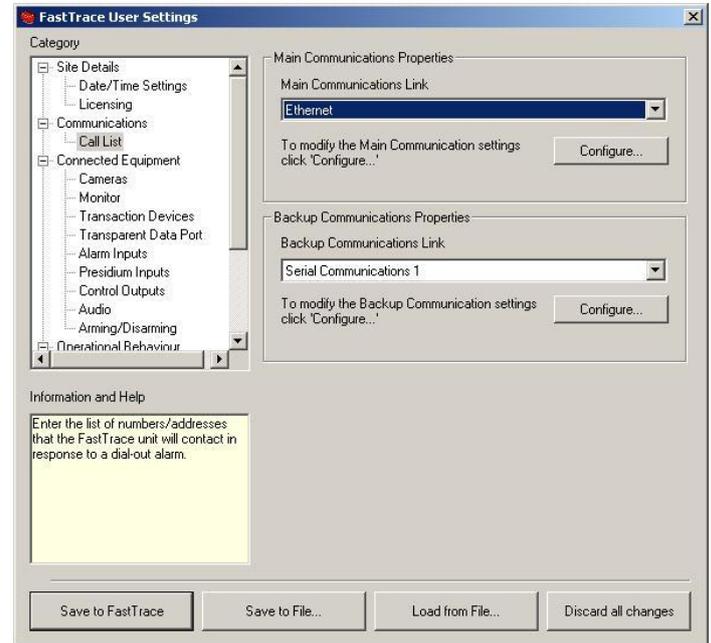
Select Configure sites then click new



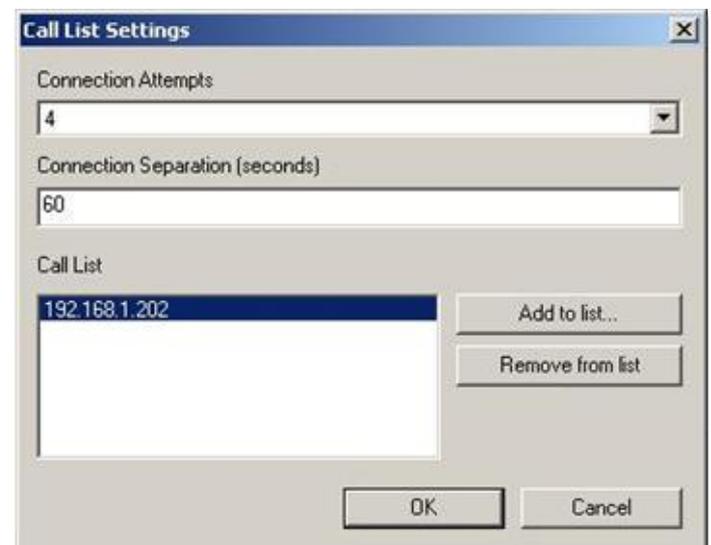
Enter the site ID and ensure the correct transmitter type is selected for the Adpro out in the field. A specific port range does not need to be set as we can use the defaults already in the system.

Select Network in the communications field and set the relevant address for the destination SPT.

The FastXXX device will need configuring with its own static LAN addressing but the difference will be in the Call List under the Communications setup.



Select the Main Communications link as Ethernet and under the configure setting put the only IP address as the WebWay SPT's LAN address. This will force the FastXXX to connect to the WebWay device which is listening for this connection.



Adpro Series

WebWay Integration – Video Central / FastTrace, Fast TX, Fast VU, FastScan

FastXXX - Actions required on-site

These models have an IP point available so they connect directly into the client network. Historically they would have been programmed with static IP addressing and configured to talk to VC directly. They still need their local addressing but instead of talking to VC they can be configured to connect locally to the SPT

1. Connect up the WebWay SPT (supervised premises transceiver) as you would for any installation as detailed in the WebWay installation guide. Auto Take-On must be performed for communications to be successful.
2. Connect up and configure the FASTXXX as detailed in its own guide.
3. Follow the details to ensure that the FastXXX is configured correctly
4. The WebWay should download all necessary setup upon Auto Take-On so no additional configuration should be required.
5. Testing of equipment needs to take place.
6. For this setup the FastXXX device will need setting up in the 'usual'



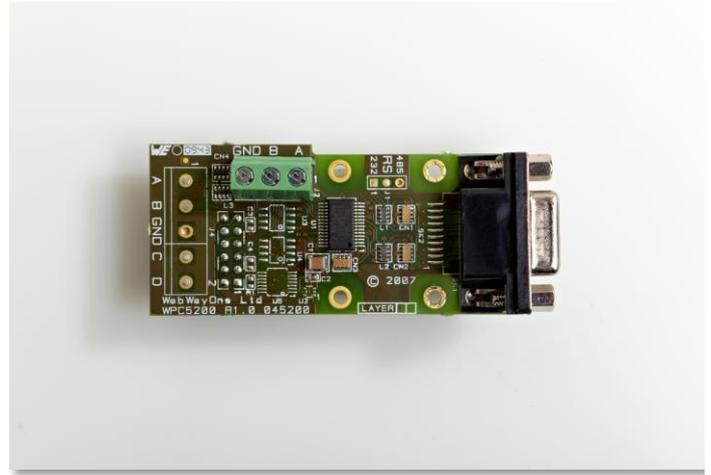
Adpro FastTrace

IMPORTANT – WebWay Dip Switch 7

Dip Switch 7 on the WebWay SPT must be **ON**. Please check this before trying any CCTV activity through the WebWay.

FastScan Configuration

This model it has no Ethernet connector so uses a serial connector which would have historically plugged onto a Modem. This is replaced with an additional DTE RS232 (22-5073) serial module which connects onto the same connector pins as the PSTN module.



WebWay DTE Module (22-5073)

The site ID doesn't have to match the SPT Account number but it does need to match what is stored at the ARC in VC. The highest modem Baud rate of 115200 is required.

IMPORTANT – Call List

Call list = 192.168.12.34:7250T -> this is usually the phone number it's set to dial but an IP address is accepted. Any IP address will suffice but the :7250T is critical.

