TCP and UDP Port Assignments

Ports You Can Use in Chart Logic

When writing your own chart logic in PAC Control, you can use the following port numbers:

Port	Description
22004 and 22005	Reserved for use in PAC Control user chart logic
49152 – 49999	Available for use in PAC Control user chart logic
51000 – 65535	

Ports You Cannot Use in Chart Logic

The following table provides a summary of the port numbers you should *not* use in PAC Control chart logic:

Port	Description
0 – 22003	Reserved by the Internet Assigned Number Authority (IANA) for purposes other than PAC Control user chart logic. For more information, see the tables below.
22006 – 49151	
50000 – 50999	Reserved by Opto 22 to be used internally by PAC and Ultimate controllers. For more information, see "TCP and UDP Port Numbers Assigned by the IANA" on page 2.

Opto 22 Reserved TCP and UDP Ports

The following port numbers are reserved for use by Opto 22 firmware:

Port	Description
2001	PAC MMP host port or OptoControl host port
2002	OptoControl peer port
2003	OptoControl peer port
22000	Reserved for future use
22001	PAC Control and ioControl host port
22002	PAC Control background download feature
22003	Reserved for future use
22500 – 22531	Used for Opto 22 serial communication modules (SCM)
50000 – 50999	Used internally by PAC and Ultimate controllers

Ports Used by Opto 22 PAC Controllers and Brains

The following port numbers are reserved for use by PAC controllers and brains:

Port	Description
20	FTP
21	FTP
25	SMTP
67	BootP server
68	BootP client
161	SNMP
162	SNMP traps
502	Modbus/TCP
2222	EtherNet/IP (UDP for I/O)
23567	PAC Controller redundancy feature
44818	EtherNet/IP (TCP & UDP explicit messages)

TCP and UDP Port Numbers Assigned by the IANA

The table below provides some information about the TCP and UDP port numbers assigned by the Internet Assigned Number Authority (IANA).

For a complete listing of port numbers assigned by the IANA, go to www.iana.org/assignments/port-numbers. See also www.iana.org for more information about the IANA.

There are three categories of TCP and UDP port numbers assigned by IANA, as follows:

- **Well Known**: Known to be unique and have only one use each. These are essentially the same as registered port numbers.
- **Registered**: Assigned by the IANA for a specific use by a company (such as Opto 22).
- **Dynamic**: Not assigned or well-known for a particular use, and thus available for use in PAC Control chart logic. If you are doing Ethernet communication, but not using one of the well-known or reserved purposes or protocols, then you would use one of these port numbers.

Category	Port	Description
Well Known	0 – 1023	You should *not* use any of these port numbers for purposes such as chart logic.
Registered	1024 – 49151	With the exception of 22004 and 22005, which are reserved for Opto 22 customers, you should not use any of these port numbers.
Dynamic	49152 – 49999	You can use these dynamic port numbers because they are not used by Opto 22 products.
	50000 - 50999	Opto 22 PAC controllers use these port numbers for internal purposes. You should not use the port numbers in this range.
	51000 – 65535	You can use these dynamic port numbers because they are not used by Opto 22 products.

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