

MASTER32 – COAX TO THE ANYWHERE ELCONnect®

SIMPLE Use of existing
coax cable infrastructure

ADAPTIVE Integrated solutions for fiber migration –
VoIP – ISDN – WLAN

FAST Internet / Data
up to 200 Mbps gross rate



THE PRODUCT

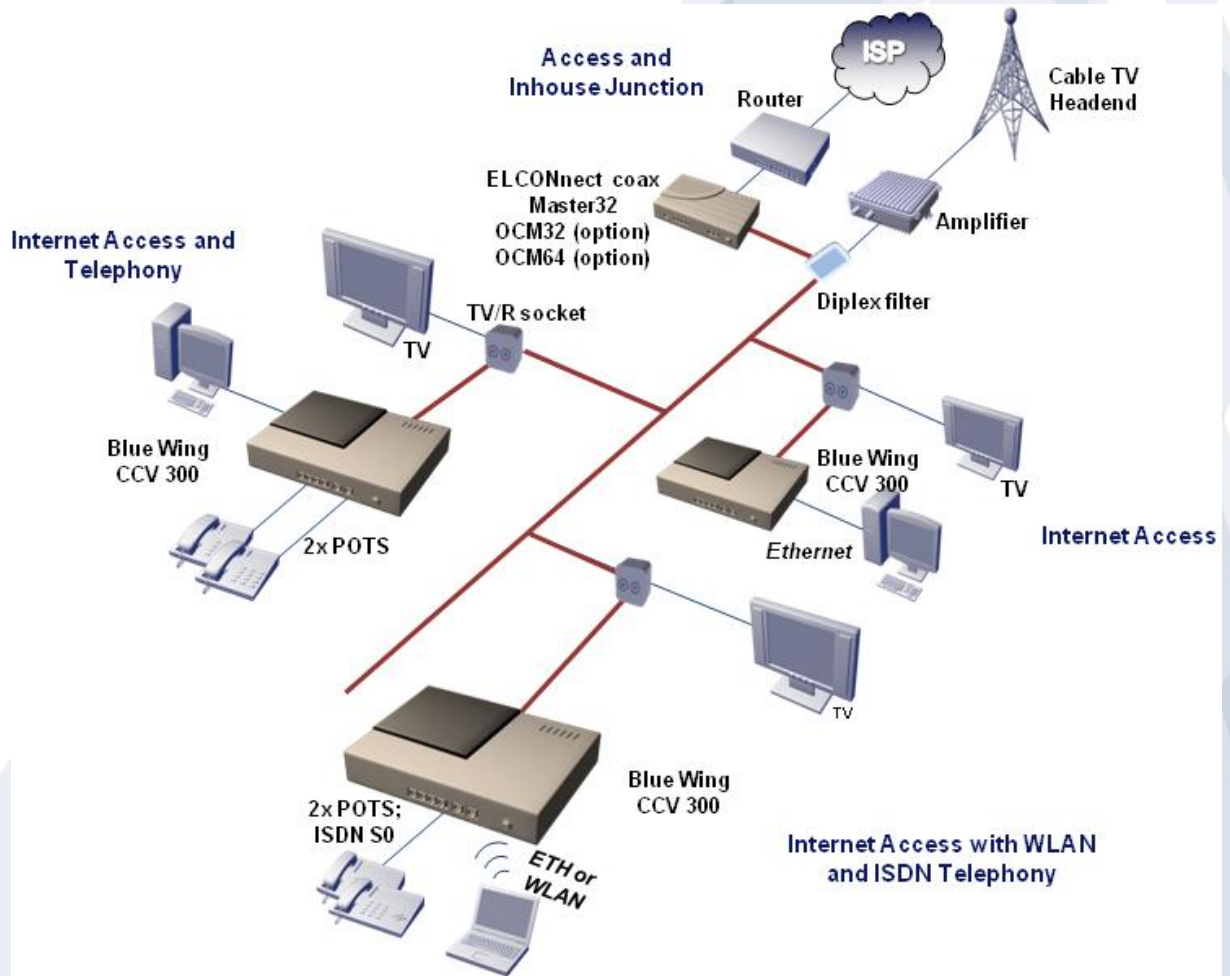
The ELCONnect coax Master32 represents the linking element between the external access networks (e.g. ADSL port or DOCSIS system) and the ELCONnect coax network. In an ELCONnect coax system, the existing cable television network infrastructure is used for setting up the data network, without spending big efforts in providing active return channel capability for the CATV. The easy and swift installation suits best for the expansion of existing cable networks, particularly in hotels or residential establishments, up to the extension of network level 4 at CATV operators.

The Master allows to connect several Clients (CCV 300). Without repeater structure, the Master32 can manage up to 32 Clients, with a PC connected via network card to each of them. The Master controls and assigns the data packets based on the MAC addresses of the linked ELCONnect coax units. All subsequent hardware structures (repeater, Client) receive their IP-addresses from the central DHCP server through the Master32, while their configuration file is made available by the connected TFTP server (depending on the configuration). Alternatively, a preset static configuration can be used.

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APPLICATION



TECHNICAL DATA

General

- Gateway function for the ELCONnect coax network
- Single-port Ethernet bridge
- Gross data rate up to 200 Mbps on "shared medium"
- Net total bit rate up to 85 Mbps on "shared medium" depending on configuration and transmission parameters (attenuation, interferences etc.)
- up to 32 nodes and 64 MAC addresses can be managed directly

ELCONnect coax Features

- UPA-compliant
- Transmission frequency 4 MHz ... 34 MHz
- Adjustable frequency range
- Modulation method: OFDM self adjusting multicarrier approach
- PSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
- 1536 carriers
- Transmit level: max. 112 dB μ V
- Receive level: 46 dB μ V ... 102 dB μ V
- Admissible linear path loss: up to 50 dB – 100% up to 70 dB – linear reduction of the data rate

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TECHNICAL DATA

Ethernet Features

- Standard Ethernet IEEE 802.3 protocol
- IEEE 802.1q, 802.1d, native Multicast
- DHCP client
- TCP/IP

Repeater function

- for structuring and expansion of coaxial cable networks
- for range increase

Quality Of Service

- Prioritization
- Definition of service classes CoS
- Bandwidth management, Bandwidth limitation
- Latency management

Management and Configuration

- Configuration via DHCP and TFTP-files
- Software configuration tools
- SNMP
- optional static configuration

Security

- Encoding of the transmission path using Tone mapping (Negotiation of physical link parameters between Master and each client as individual virtual P2P connection)
- VLAN, oVLAN

Physical parameters

Power supply (Euro mains plug)

- Nominal voltage: 230 V AC, 50 Hz, max. 100 mA
- Power consumption: 7.5 W

LED display

- 1 × POWER (Power supply)
- 1 × LINK (Coax network)
- 1 × LAN (LAN interface)
- 1 × INFO (Device)

External ports

- 1 × RJ45 Ethernet (8-pin) 10/100 Base-T, MDI/MDIX autosensing
- 1 × F-connector 75 Ω for linking the coaxial cable
- Mains connection

Chipsets

- AFE DSS7700
- PowerLine IC DSS9001

Dimensions

- Dimensions (W × D × H): 195 mm × 165 mm × 44 mm
- Weight: 0.5 kg

Environmental conditions

- Operation: 0 °C ... 45 °C
- Humidity: 10 % ... 85 % (not condensing)
- Storage: -40 °C ... 70 °C
- Humidity: 0 % ... 85 % (not condensing)

Conformity

- CE-marking
- EN 60950-1, ETSI EN 300 386, EN 55022, EN 55024

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TECHNICAL DATA

System requirements

ELCONnect coax System

- ELCONnect coax Master32 or Master64 as Gateway to other networks and for control of the ELCONnect coax network
- Corresponding amount of Clients (CCV 300)
- Cable television network with passive return channel in the frequency range

PC Hardware

- depending on the configuration (static / dynamic) and the network access
- network router
- DHCP server, TFTP server, RADIUS server
- Interface: 10/100Base-T

Operating System

- any OS supporting TCP/IP- protocol and providing Ethernet LAN interfaces
- Windows 98 SE, Windows ME, Windows 2000/XP, MAC, Linux

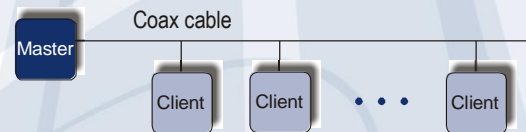
For the Planning Stage

- analyze existing cable television network (network structure, amplifiers, cable attenuation, PAY-TV carriers)
- Remark: The CATV network needs a passive return path. Potentially installed CATV amplifier needs to be checked and equipped.
- determine maximum number of needed Clients
- Accessories: TV distributor

Network structures

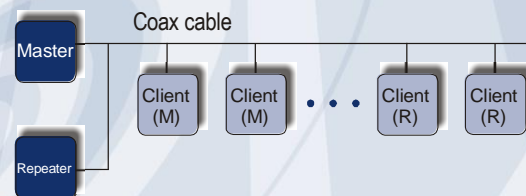
Simple installation

- 1 Master and up to 32 Clients



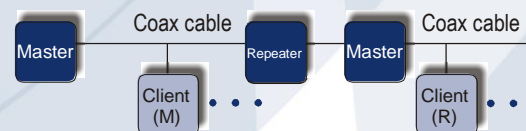
Dual-Master

- 2 Master for up to 63 Clients
- 1 Master configured as repeater



Extended Range Configuration

- 3 Master and up to 31 Clients per network segment
- 1 Master configured as repeater



Other network structures are possible, depending on the Coax infrastructure and the respective application scenario.

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PURCHASE ORDER INFORMATION

Product designation	Order number
ELCONnect coax Master32	900047