

# C6 ROUTER



## HIGHLIGHTS

- Remote monitoring using Ethernet-based router
- Worldwide support from several server locations
- Also available as router with integrated 3G/4G modem
- Access to remote devices via Ethernet or serial interface
- Proven COMBIVIS connect software connects the plant to be monitored to your workplace via VPN
- Additional HMI functionality for datalogging, long-term machine diagnostics and notification by E-Mail and SMS

# C6 ROUTER

DC POWER SUPPLY  
2X DI / 5" DO

3G/4G  
ANTENNA

STATUS-LED

ETHERNET LAN

ETHERNET WAN

SERIAL  
(RS 232 / 422 / MPI)

SIM CARD  
SLOT (REAR)



COMBIVIS connect  
COMBIVIS studio 6  
COMBIVIS HMI



LAN



Internet



COMBIVIS connect  
Server infrastructure

COMBIVIS connect  
Runtime



WAN



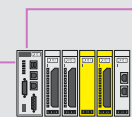
COM



LAN



EtherCAT



**C6 ROUTER E / L (3G/4G)**

	<b>E1</b>	<b>E2</b>	<b>E3</b>	<b>E4</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>L4</b>
Remote maintenance	CONNECT	CONNECT	-	CONNECT				
Visualisierung	-	HMI	HMI	HMI				
Cloud	-	-	Cloud	Cloud				
<b>MOBILE NETWORK (ONLY L ROUTER)</b>								
Type	-	-	-	-	2G/3G/4G LTE Pentaband Modem up to 50 Mbps upload/100 Mbps download			
Band	-	-	-	-	FDD-LTE: B1/B2/B3/B4/B5/B7/B8/B17/B20; TDD-LTE: B38/B40; UMTS/HSPA+: B1/B2/B5/B8; GSM/GPRS/EDGE: 900/1800 MHz			
Antenna	-	-	-	-	1 x SMA Plug (various additional antenna option)			
SIM	-	-	-	-	1 x SIM Card (mini) socket push-push type			

**CPU**

Processor	ARM Cortex A8 processor Freescale® i.MX535 1 GHz
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**MEMORY**

System memory	RAM - 1 GB
NAND-Flash	256 MB for operating system and runtime environments (internal, not removable)
eMMC (Solid State Disc)	2 GB      4 GB project memory for free use

**OPERATING DATA**

Power supply	9 ... 36 V DC
Operating environment	0 ... 50 °C (-20 ... 70 °C Option), rel. humidity up to 95 % (without condensation)
Lagerbedingungen	-20 ... 60 °C (-20 ... 70 °C Option), rel. humidity up to 95 % (without condensation)

**OPERATING DATA**

	Windows Embedded Compact 7 Pro
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**APPROVALS**

	CE, cULus
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**INTERFACES**

Ethernet	WAN 1 x 10/100 Mbps (RJ45)
	LAN 1 x 100 Mbps (RJ45)
USB on back	1 x USB 2.0
Serial interface	1 x RS232/422/485 (DB15M) / MPI 187. kbit/s (galvanically separated)

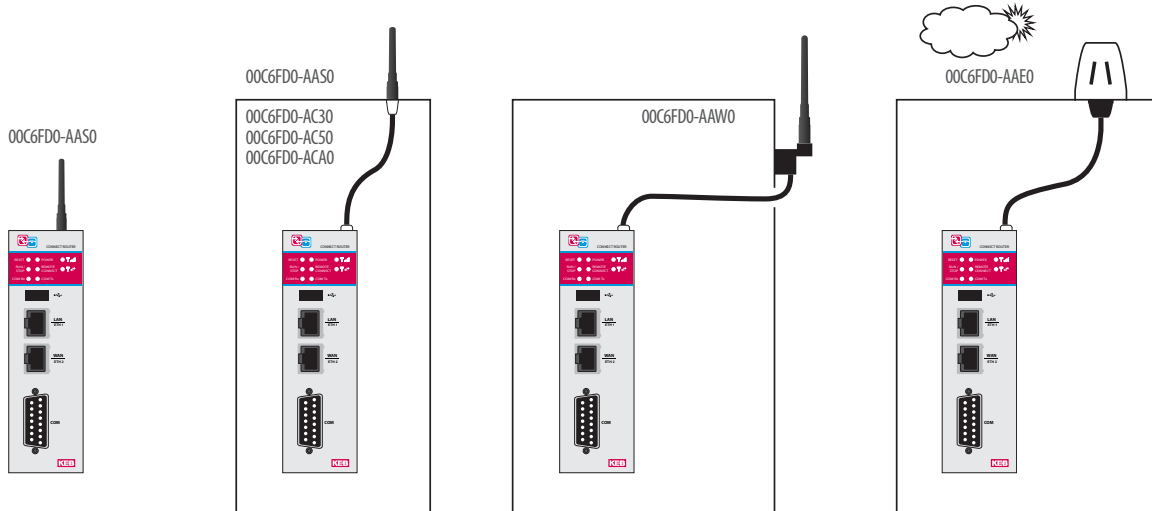
**DIGITAL I/O'S**

Inputs	IN0 - Secured activation WAN connection. Function controlled by COMBIVIS Control Center
	IN1 - C6 Router software reset
Ausgänge	OUT0 C6 Router WAN connection active (output relay max. 200 mA /24 V DC)
	OUT1 remote monitoring active (output relay max. 200 mA /24 V DC)

**PUSHBUTTON**

Buttons	C6 Router hardware reset
	C6 Router default setting

# C6 ROUTER



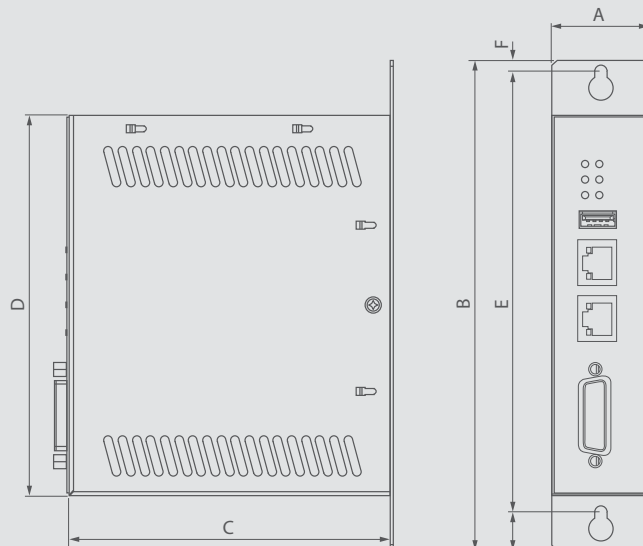
Stick antenna

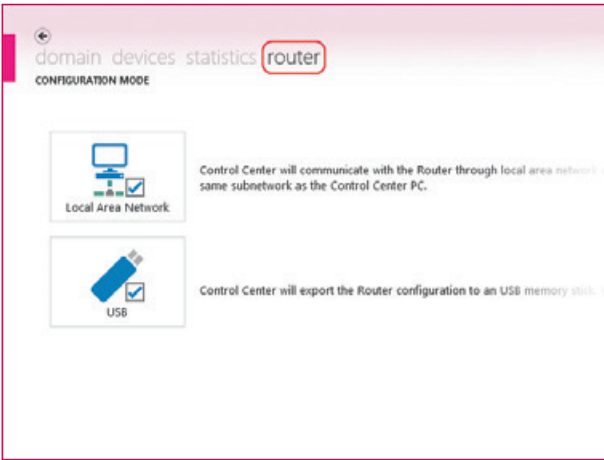
Stick antenna extension 3, 5, 10 m

Stick antenna Wall mounted IP67, 3 m

Outdoor antenna IP67, 1 m

	A	B	C	D	E	F	G
<b>C6 ROUTER EX</b>	35	177	116	138	159	4	14
<b>C6 ROUTER LX</b>	45	177	116	138	159	4	14





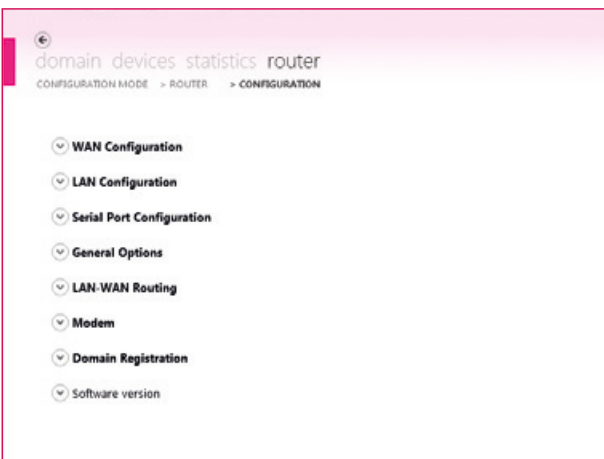
The C6 Router can be configured via two different communication paths:

- manually with local network connection
- from exported configuration data via USB memory stick



The configuration of the C6 Router is protected with necessary log-on data.

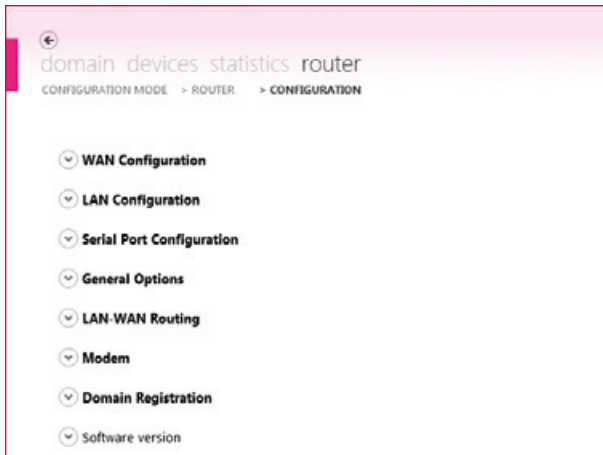
The routers available in the local network are identified via unique MAC addresses.



The configuration level is easy to understand, self-explanatory and limited to a minimum number of parameters.

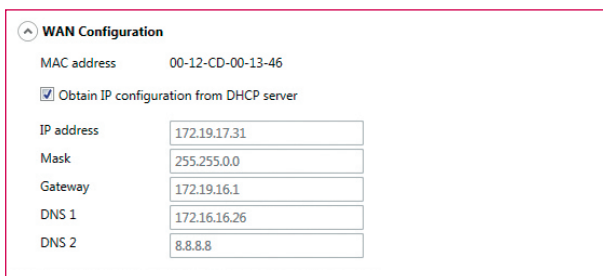
However a number of communication paths are possible, guaranteeing a high usage density.

# CONFIGURATION



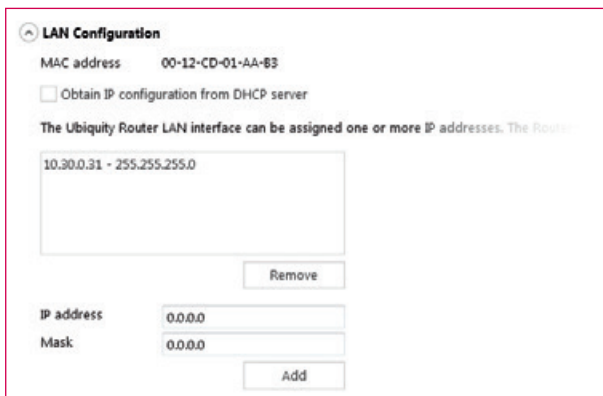
After a few minutes of router configuration, you have worldwide access to remote devices for maintenance and monitoring - irrespective of device type and manufacturer.

## CONFIGURATION STEPS



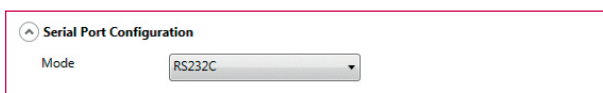
### Step 1

WAN-Port as Internet access (server infrastructure) – IP address can be assigned statically or automatically via DHCP.



### Step 2

IP configurations from one or more local automation networks accessible via VPN tunnel.



### Step 3

As well as local Ethernet-linked networks, serial connections can be set up via a VPN tunnel.



**General Options**

New password

Confirm password

Availability mode

Internet connectivity

Proxy configuration

Proxy address

Proxy port

Proxy username

Proxy password

#### Step 4

Variable configuration with regard to connection type (WAN, Modem), handling of Internet activation (constant, via SMS and/or digital input).

**LAN-WAN Routing**

Enabled

Add IP addresses (i.e. 192.168.100.1/255.255.255.255) or ranges (i.e. 192.168.100.0/255.255.255.0)

I/F	IP address	Subnet mask
WAN	172.17.129.0	255.255.255.0
LAN	192.168.0.0	255.255.255.0

I/F

IP address

Mask

#### Step 5

The LAN-WAN routing allows configuration of rules between the two Ethernet interfaces of the router (LAN and WAN) which define the static routing of individual IP addresses or address ranges.

**Modem**

Status

Carrier mode

Signal strength

PIN code

APN

Username

Password

Domain

Dialed number  i.e. \*99#

#### Step 6

To be able to use Internet access via modem (UMTS), the provider access data (SIM card) can be configured here.

**Domain Registration**

The domain registration operation creates a new Router identity on the server and assigns an initial name. The device is initially located into the root of your domain. You can later rename the device or move it into another subfolder by using the Domain browser.

The registration operation will overwrite a previous identity if already present. Please double check that you want to do it.

Create and register a new identity for the Router into the domain.

Initial name  Please insert a valid name

Folder  Please select a folder

#### Step 7

Domain registration opens the possibilities of remote device maintenance, and access can be managed user oriented.