C6 ROUTER

HIGHLIGHTS

- Remote monitoring using Ethernet-based router
- Worldwide support from several server locations
- Also available as router with integrated 2G/3G/3G+ 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

DC POWER SUPPLY
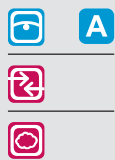**2X DI / S" DO**

2G/3G/3G+/4G
ANTENNA

STATUS-LED

ETHERNET LAN

ETHERNET WAN

SIM CARD
SLOT (REAR)

SERIAL
(RS 232 / 422 / MPI)

COMBIVIS connect
COMBIVIS studio 6
COMBIVIS HMI

COMBIVIS connect
Runtime
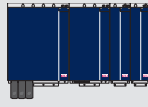
Internet

LAN

WAN

COM

LAN

EtherCAT

COMBIVIS connect
Server infrastructure

C6 ROUTER E / M (3G/3G+)

	C6 ROUTER E1	C6 ROUTER E2	C6 ROUTER E3	C6 ROUTER E4	C6 ROUTER M1	C6 ROUTER M2
Remote maintenance	CONNECT	CONNECT	-	CONNECT	CONNECT	CONNECT
Visuallisierung	-	HMI	HMI	HMI	-	HMI
Cloud	-	-	Cloud	Cloud	-	-

MOBILE NETWORK					**3G / 3G+**	
Type	-	-	-	-	2G/3G/3G + EDGE/HSPA Quadband Modem up to 5,76 Mbps upload / 21,6 Mbps download	
Band	-	-	-	-	UUMTS/HSPA+: B1/B2/B5; GSM/GPRS/ EDGE: 850/900/1800/1900 MHz	
Region	-	-	-	-	Europe, North- / Latin America, Asia, Africa, Oceania	
Antenna	-	-	-	-	1 x SMA plug (various additional antenna options)	
SIM	-	-	-	-	1 x SIM Card (mini) socket push-push type	

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

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 project memory for free use / 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

APPROVALS	
	CE, cULus

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 L (4G/LTE)

	C6 ROUTER L1	C6 ROUTER L2	C6 ROUTER L3	C6 ROUTER L4
Remote maintenance	CONNECT	CONNECT	-	CONNECT
Visualization	-	HMI	HMI	HMI
Cloud	-	-	Cloud	Cloud
MOBILE NETWORK	**4G/LTE**			
Type	2G/3G/4G LTE Pentaband Modem up to 50 Mbps upload/100 Mbps download			
Band	FDD-LTE: B1/B3/B7/B8/B20; TDD-LTE: B38/B40; UMTS/HSPA+: B1/B8; GSM/GPRS/EDGE: 900/1800 MHz			
Region	Europe, Latin America, Asia, Africa, Oceania			
Antenna	1 x SMAStecker (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			
MEMORY				
System memory	RAM - 1 GB			
NAND Flash	256 MB für Betriebssystem und Laufzeitumgebungen (intern, nicht entfernbar)			
eMMC (Solid State Disk)	4 GB Projektspeicher zur freien Nutzung			
BETRIEBSDATEN				
Power supply	9 … 36 V DC			
Operating environment	0 … 50 °C (-20 … 70 °C Option), rel. humidity up to 80 % (without condensation			
Storage conditions	-20 … 60 °C (-20 … 70 °C Option), rel. humidity up to 80 % (without condensation)			
OPERATING SYSTEM				
	Windows Embedded Compact 7 Pro			
APPROVALS				
	CE, cULus			
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 187,5 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			
Outputs	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			

KEB

ROUTER L (4G) / K (4G-AM)

	C6 ROUTER K1	C6 ROUTER K2	C6 ROUTER K3	C6 ROUTER K4
Remote maintenance	CONNECT	CONNECT	-	CONNECT
Visualization	-	HMI	HMI	HMI
Cloud	-	-	Cloud	Cloud

MOBILE NETWORK	4G-AM
Type	2G/3G/4G Pentaband Modem up to 50 Mbps upload/100 Mbps download
Band	FDD-LTE: B2/B4/B5/B17; UMTS/HSPA+: B2/B5
Region	North- / Latin America
Antenna	1 x SMAStecker (various additional antenna options)
SIM	1 x SIM Card (mini) socket push-push type

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

MEMORY	
System memory	RAM - 1 GB
NAND-Flash	256 MB for operating system and runtime environments (internal, not removable)
eMMC (Solid State Disk)	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 80 % (without condensation)
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OPERATING SYSTEM	
	Windows Embedded Compact 7 Pro

APPROVALS	
	CE, cULus

INTERFACES	
Ethernet	WAN 1 x 10/100 Mbps (RJ45)
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PUSHBUTTON	
Buttons	C6 Router hardware reset
	C6 Router default setting

C6 ROUTER

00C6FD0-AAS0

00C6FD0-AAS0

00C6FD0-AC30
00C6FD0-AC50
00C6FD0-ACA0

00C6FD0-AAW0

00C6FD0-AAE0

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
C6 ROUTER EX	35	177	116	138	159	4	14
C6 ROUTER MX	45	177	116	138	159	4	14
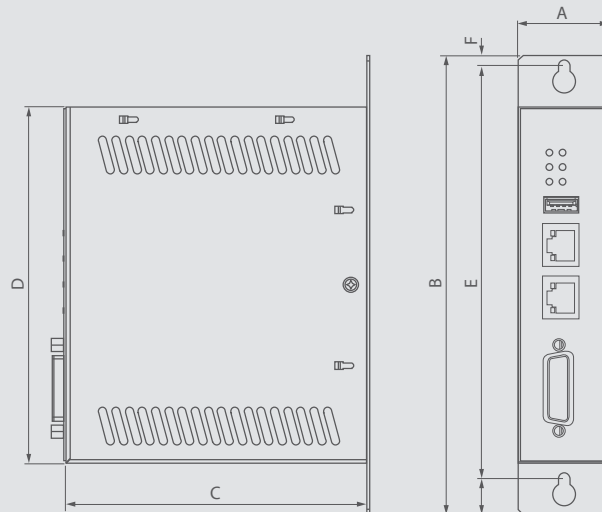
The C6 Router can be configured via two different communication paths:

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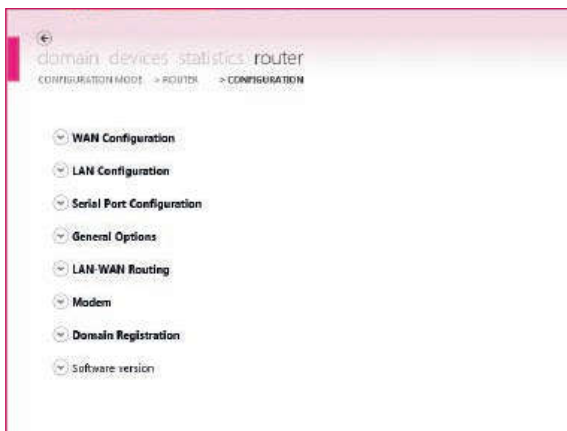
The configuration level is easy to understand, self-explanatory and limited to a minimum number of parameters.

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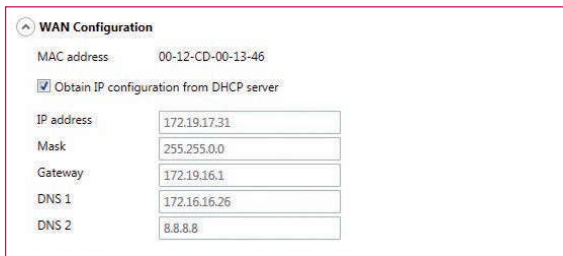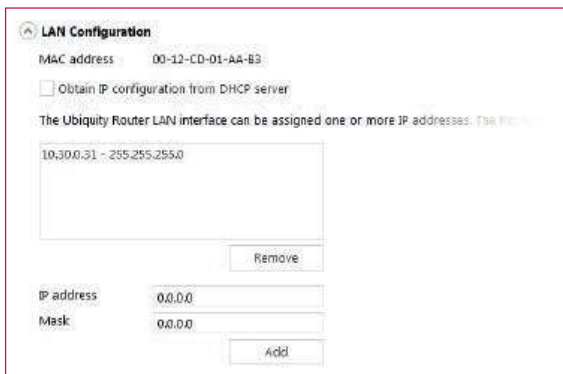
CONFIGURATION

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.
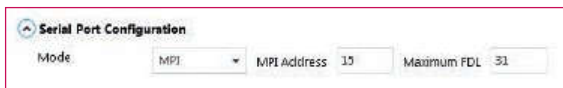

Step 2

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	Always on
Internet connectivity	WAN only
Proxy configuration	None
Proxy address	
Proxy port	80
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...

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

Remove

IF	WAN
IP address	172.17.129.180
Mask	255.255.255.0

Add

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	Disconnected
Carrier mode	WCDMA
Signal strength	
PIN code	
APN	
Username	
Password	
Domain	
Dialed number	*99#	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

Select

Step 7

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